DOCUMENT RESUME

ED 481 278 RC 024 192

TITLE	Engaged Institutions: Impacting the Lives of Vulnerable Youth through Place-Based Learning.
INSTITUTION	Rural School and Community Trust, Washington, DC.
SPONS AGENCY	Kellogg Foundation, Battle Creek, MI.
PUB DATE	2003-06-00
NOTE	97p.
AVAILABLE FROM	For full text: http://www.ruraledu.org/docs/kellogg/kellogg.pdf/.
PUB TYPE	Reports - Research (143)
EDRS PRICE	EDRS Price MF01/PC04 Plus Postage.
DESCRIPTORS	American Indian Education; Black Education; Case Studies; *College School Cooperation; *Community Development; Cultural Maintenance; *Disadvantaged Youth; Educational Change; Elementary Secondary Education; Higher Education; Hispanic Americans; *Partnerships in Education; Place Based Education; Rural Education; *Rural Schools; *School Community Relationship; Student Motivation

ABSTRACT

Six case studies examine the connections between higher education institutions and schools that have chosen place-based education as a framework for student learning and community growth. Through such partnerships, Lubec (Maine) high school has established a vocational aquaculture program in an effort to revitalize the struggling local fishing economy. Five rural Mississippi Delta school districts are raising academic skills and cultural pride through the writing process. The Navajo Nation is reclaiming its culture and developing and retaining native Navajo language-speaking teachers. Hispanic communities in northern New Mexico are focusing on water use and conservation. Twenty-nine school districts in Virginia and Kentucky are engaging students in media projects that address issues confronting central Appalachia. In Missouri, 10-15 rural school districts are working to increase teacher supply and retention. Findings indicate that the engagement of higher education institutions is usually limited to one or two impassioned faculty members in one or two departments or in a separately-created entity in the university. Place-based learning provides a focused and structured means for higher education institutions to impact the lives of vulnerable youth. Place-based learning can engage vulnerable youth in rigorous academics and increase their civic consciousness and participation. While university engagement with communities changes some faculty members' lives, institutional change is harder to effect. Community engagement appears easier for community colleges than universities. Recommendations for enabling institutional engagement are presented. (TD)

Reproductions supplied by EDRS are the best that can be made
from the original document.

ED 481 278

Engaged Institutions:

Impacting the Lives of Vulnerable Youth Through Place-Based Learning

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

R. Tompkins

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

1

The Rural School and Community Trust

June 2003

RC 024192

BEST COPY AVAILABLE

Copyright © 2003 by the Rural School and Community Trust. All rights reserved.
Printed in the United States of America.

Except as permitted under the United States Copyright Act of 1976, no part of this publication may be reproduced or distributed in any form or by any means, or stored in a database or retrieval system without prior written permission of the publisher.

The publication of this report is made possible by a grant from the W.K. Kellogg Foundation of Battlecreek, Michigan.

To order a copy of this publication, please contact the Rural School and Community Trust.

Rural School and Community Trust
1825 K Street NW, Suite 703
Washington, DC 20006
Telephone: (202) 955-7177
Fax: (202) 955-7179
E-mail: info@ruraledu.org

The Rural School and Community Trust (Rural Trust) is the premier national nonprofit organization addressing the crucial relationship between good schools and thriving rural communities. Working in some of the poorest, most challenging rural places, the Rural Trust involves young people in learning linked to their communities, improves the quality of teaching and school leadership, advocates for appropriate state educational policies, and addresses the critical issue of funding for rural schools.

Printed on recycled paper.

Table of Contents

Contributors *iii*

List of Tables *iv*

List of Figures *v*

Executive Summary *1*

Revitalizing Economies Around Cobscook Bay
By Michelle Hynes *9*

Crossroads: Promising Practices of Change in the Mississippi Delta
By Jereann King 23

Reclaiming Indian Education Through Partnerships with Engaged Institutions
By Sandra J. Wilson 39

Acequias: Nourishment for People, Education and the Land
By Sylvia Parker and Jose Colchado *53*

University-Community Partnerships: Addressing Community Issues Through Alternative Media
By Martin Newell *67*

The Missouri Education Renewal Zones
By Vicki Hobbs *79*

Contributors

Michelle Hynes is an independent education consultant based in Washington, DC. She was formerly manager of the PEN Education Division and the Reading is Fundamental National Book Program.

Jereann King is an independent education consultant and adult educator from Warrenton, North Carolina.

Sandra J. Wilson is an independent consultant and news reporter from Flagstaff, Arizona.

Sylvia Parker is an education consultant and regional steward for the Rural School and Community Trust.

Jose Colchado is a professor of education at Northern Arizona University.

Martin Newell is a principal staff person at the Center for Rural Strategies and a consultant to the Rural Trust for the Appalachian Region.

Vicki Hobbs is an independent education and telecommunications consultant based in Columbia, Missouri.

List of Tables

Table 1. Writing Assessment Scores *33*

Table 2. 2001 Population Estimates *69*

Table 3. AREN School SOL Scores as a Percentage of the Virginia Average *76*

Table 4. St. Paul Elementary SOL Scores as a Percentage of the Virginia Average (3rd Grade) *77*

Table 5. AREN School CATS Scores as a Percentage of the Kentucky Average *77*

List of Figures

Figure 1. The Mississippi Change Funnel *35*

Figure 2. New Mexico Ethnicity *55*

Figure 3. Discontinuities in the Current Education System *82*

Executive Summary

Institutional engagement in rural schools and communities is a challenging but necessary enterprise. Often isolated from the services and amenities of urban life, many rural communities find their well-being, and even their survival, inextricably linked to that of their schools. In many instances, the schools, with their own set of challenges, are the community's greatest internal resource. Together, rural schools and communities are the greatest hope for improving and sustaining rural places. Yet the challenge of mere survival too often distracts them from capitalizing on their major assets—small size and rural setting. Although the impetus for change should be internal, genuine partnerships with higher education institutions can help rural schools and communities maximize their positive aspects, overcome their many challenges, and improve the life chances of their young people. The challenge, as our experience and research attest, is to fashion the conditions and mechanisms that would allow for greater institutional involvement in ways that directly impact the lives of local people.

The Rural School and Community Trust (Rural Trust) is the premier national nonprofit organization addressing the crucial relationship between good schools and thriving rural communities. By deliberately choosing to work in rural places that are distressed by historic patterns of poverty and racism or stressed by population decline, demographic changes and fundamental economic shifts, the Rural Trust has also dedicated itself to impacting the lives of rural America's most vulnerable youth.

Over the past seven years, the organization has built a network of schools and communities throughout the country, all engaged to some extent in learning that is rooted in what is local—the unique history, environment, culture, and economy of a particular place. The community provides the context for learning, student work focuses on community needs and interests, and community members serve as resources and partners in every aspect of teaching and learning. We call this place-based learning. We have discovered that this local focus has the power to engage students academically, pairing real-world relevance with intellectual rigor, while promoting g[illegible] citizenship and preparing people to respect and live well in any community they choose.

With funding from the W.K. Kellogg Foundation, the Rural Trust sponsored six different researchers to develop case studies examining the connections between higher education institutions and vulnerable youth in communities that have chosen place-based education as a framework for student learning and community growth.

The Case Study Institutions and Communities

The six case study communities (Lubec, Maine; the Mississippi Delta; the Navajo Reservation; Sangre de Cristo in New Mexico; the Appalachian regions of Kentucky and Virginia; and the state of Missouri) were chosen to represent the ethnic and geographic diversity of rural America. The focus of their place-based work is as diverse as the communities themselves.

Lubec, Maine, for example, sits at the easternmost point of the United States. A small town of

approximately 1,800 people, its economy has historically depended on the sea, with many residents etching out a living as lobster fishermen, scallop draggers, clam diggers or fish packers. In 1996, Lubec was looking for ways to revitalize its struggling economy. Lubec's youth joined that effort with the establishment of the only vocational aquaculture program in the state and are now raising tilapia, maintaining a hydroponics greenhouse, recycling wastewater from the fish tanks, farming mussels, and selling bait minnows to local fishermen. The Lubec case study examines the engagement of three higher education institutions—University of Maine-Machias, Washington County Technical College, and the Friedman Field Station of Suffolk University—with the vocational aquaculture program at Lubec High School and related place-based projects in communities around the Cobscook Bay. Lubec's focus and vision provide particularly rich examples of how schools, communities, and higher education institutions can work together to improve a local economy and, at the same time, expand options for adolescents who have not been successful in traditional school settings. Their story emphasizes the interdependence of a variety of community institutions in a place whose way of life is threatened by a shrinking population and a changing economy.

The Mississippi Thinking and Writing Institute at Mississippi State University connected with the Delta Five Cluster, a consortium of five rural school districts, to raise the academic skills and cultural pride of its young people with a focus that linked the school and community through the writing process. With a traditional economy built on slave labor, sharecropping and tenant farming, the Mississippi Delta is one of America's most troubled regions. While some improvements have been made, the region still has one of the highest levels of poverty in the nation, worsened by educational inequities and inadequacies, low school performance, and continuing problems with voting rights and political representation. Birthplace of America's blues music, the Delta is home to high concentrations of African Americans, up to 60% in most areas.

The Navajo Nation is the largest Indian tribe in America, numbering 298,197 according to the 2000 U.S. Census. A total of 255,543 individuals identified as Navajo (85.7%) are actually enrolled members of the Navajo Nation. Of the 180,000 (70.4%) who live on the reservation, 168,000 (93.3%) are officially enrolled. Spanning 27,000 square miles in Arizona, Utah and New Mexico, the Navajo reservation is larger than ten of America's 50 states, making partnerships between higher learning institutions and the Nation's vulnerable youth difficult to establish and maintain. Despite the geographical vastness, Northern Arizona University has partnered with schools in seven districts to reclaim Indian education and culture and to develop and retain native Navajo language-speaking teachers.

New Mexico Highlands University connected with the mostly Hispanic communities in an area of northern New Mexico reaching from the Rio Grande through the Sangre de Cristo Mountains to make up the Sangre de Cristo Communities and Schools Consortium. In a region where the average rainfall is between eight and 25 inches annually, water is a precious resource. Building on the experience of the Native Americans and early Hispanic settlers, the acequia system (a community-based organization of people and resources used to create and maintain a network of irrigation ditches that provide water for the numerous family plots of planted land) was established in northern New Mexico and is still in use today. Because of the importance of water and the associated acequia system in the region's past, present and future, the case study focused on New Mexico Highlands University's engagement with schools and communities on the issues of water use and conservation through a better understanding of the acequia system.

Central Appalachia, specifically the communities that lie on either side of the Kentucky-Virginia

border, is one of the most depressed places in rural America. Anti-poverty efforts have poured money into the region for the past 40 years but have largely missed many of the hollows and coal camps that have been the region's economic lifeline for nearly 100 years. Nine decades of coal mining, including the strip mining of the past 25 years, have severely scarred the land. The Appalachian Rural Education Network (AREN), its higher education partners (University of Kentucky, University of Virginia at Wise, and Southeast Community College) and 16 school districts in 13 Virginia and Kentucky counties engaged young people in community media projects to address the issues confronting them. With topics ranging from the Scotia Mine Disaster of 1976 to the Appalachian Underground Railroad and the events of September 11, 2001, young people have produced award-winning videos and films, oral histories and photographic journals and thereby engaged adults in discussions of sensitive and sometimes painful issues.

Finally, a unique and comprehensive university-school-community partnership, called an Educational Renewal Zone (ERZ), is emerging in Missouri. With 524 school districts, the state is facing critical teacher shortages in some academic areas, including mathematics, science, foreign language, and special education. The ERZ initiative is centered on three higher education institutions (Central Methodist College, Southeast Missouri State University and Northwest Missouri State University) each in partnership with 10–15 geographically or technologically proximate rural school districts and their communities in an effort to improve student learning, expand curricula offerings and increase teacher supply and retention. This statewide model has other key partners, including a two-year technical college, state departments of elementary and secondary education and higher education, and statewide technology support organizations. This model has powerful lessons about institutional change in response to practitioner needs, and about inter-institutional collaboration.

As ethnically and geographically diverse as they might be, the study communities have several characteristics in common. They are generally characterized by geographic isolation (Lubec, Navajo Reservation, Sangre de Cristo), high levels of poverty, out-migration, demographic shifts and limited options for young people. Some have long histories of oppression (Mississippi Delta and Navajo); some are struggling to revitalize their economies in the face of global change (Lubec, Delta, Appalachia); and some are trying desperately to reclaim their heritage, renew their cultural pride and reconnect their young people to their elders (Delta, Navajo, Sangre de Cristo). In all cases, their young people are highly vulnerable.

The higher education institutions in the study are also diverse. Central Methodist is a church-affiliated liberal arts college. Northwest and Southeast Missouri State universities are four-year regional institutions with outreach campuses in various parts of the state. The University of Kentucky, University of Virginia at Wise, Northern Arizona University, and New Mexico Highlands University are all state institutions as well. Diné College, the "college of the Navajo Nation," is based in Tsaile, Arizona, and has satellite campuses in outlying communities. All of the four-year institutions have teacher development programs. Linn State (Missouri), Southeast Community College (Kentucky), and Washington County Technical College (Maine) are two-year institutions.

The Research Questions

The research was guided by several questions, one set related to university-school connections and another to impact on vulnerable youth. Questions regarding university-school connections were

1. How have higher education institutions been engaged in the communities or the schools that have implemented place-based learning?

2. Have they operated with the principles espoused in Kellogg Foundation's New Options program—with mutuality, reciprocity, respect for culture and history, etc.?

3. Has the process of working with place-based learning and connecting with schools and communities changed the institutions' practice in community engagement generally and in relation to K-12 schools in particular?

4. Have changes occurred in teacher preparation programs as a result of institutional engagement in schools and communities?

Regarding vulnerable adolescents, the questions were

1. Have the most vulnerable adolescents been engaged in the place-based learning?

2. What are the results in terms of school success (attendance, retention in school, achievement)?

3. We have anecdotal evidence to suggest that some students ready to leave school have been reengaged in learning through place-based education. What aspects of place-based learning seem to have special appeal to vulnerable students, making them want to learn and stay in school?

The Rural Trust's experiences over the past six years and the six case studies on institutional engagement with vulnerable youth through place-based learning have netted several important lessons.

Lessons Learned

The case studies revealed the following important points about the engagement of higher education institutions in place-based learning in rural communities.

Engagement is usually limited to one or two impassioned faculty members in one or two departments or in a separately created community outreach entity of the university. The Writing and Thinking Institute at Mississippi State University, the Friedman Field Station at Suffolk University and the Appalachian Rural Center at the University of Kentucky are examples of this phenomenon.

Except for the placement of teaching interns in cooperating schools, university connections to schools are most often shallow, temporary and informal. With the current push for more relevance in teacher preparation programs, many higher education institutions are finding ways to strengthen their ties to K-12 schools through professional development school (PDS) relationships. Still, engagement is most often limited to that purpose, to a small group of cooperating teachers or clinical supervisors, and to individual units and faculty members within the institutions.

Beyond pre-service teacher preparation, the most common institutional roles seem to be the following:

- *Intermediaries or fiscal agents* for funding proposals from which they get often high overhead cost rates but for which there is little, if any, institutional support.
- *Hosts for meetings, workshops and conferences*, very often with little engagement beyond the provision of facilities and access to supporting technology.
- *Pre-college program providers*, generally as a result of increased competition over new students.

- *Staff development providers*, usually through one-shot or short-term efforts around discreet projects or activities with little or no sustained follow up over time. In many instances, these services are defined by contractual agreements between a school system and a university faculty person with whom the system, or someone in the system, has had some prior relationship.
- *Technical assistance providers*, again around discreet projects and for limited periods of time. Such assistance might include curriculum development and alignment with state standards, grant proposal writing and the like.

Largely dependent upon the passion and commitment of individuals, these relationships are highly volatile and often fade as individuals move on to other assignments or interests. Rarely do these connections extend beyond the school into the communities of which they are a part.

Individual faculty members may have the desire to become more involved with schools, communities and vulnerable youth but often "don't know how" (Cobscook Case Study). ***Place-based learning provides a focused and structured means for higher education institutions to impact the lives of vulnerable youth*** through direct engagement with their schools and communities.

The interdisciplinary focus of place-based learning also holds the potential to bridge the chasms that often exist within higher education institutions, bringing together faculty from schools of education, colleges and departments of arts and sciences, and other units.

Place-based learning has the power to engage and re-engage vulnerable young people in rigorous academics and to increase their civic consciousness and participation. The measure of success for school reform programs in the current accountability climate is almost solely a state-mandated, standardized test score. While many of the schools that are using place-based learning strategies report significant increases in student test scores (Mississippi, Appalachia), others report significant changes in other important indicators as well, e.g., increased attendance (Lubec and New Mexico), lower drop out rates (Navajo and Lubec), increased parental and community involvement in schools (New Mexico, Navajo) higher aspirations and expectations for student learning (Lubec) and overall greater enthusiasm for learning.

While university engagement in schools and communities changes some lives [faculty members], changes in university teaching and learning overall are more difficult to effect. Individual faculty members who have become engaged in the work and lives of schools and communities talk passionately about the significant changes such connections have made in their teaching practice and their perspective. Yet, those changes rarely add up to institutional change overall. There are exceptions, though, and institutional change is more likely to occur when partnerships:

1. Are intentionally designed with all stake holders at the table from the beginning, addressing a common concern (Missouri)

2. Have faculty members who are freed from other responsibilities and for whom the work is seen as part of their faculty role (Maine)

3. Have a respected and visionary intermediary at work (Missouri, Maine, Mississippi Delta), negotiating, facilitating, and serving as a catalyst for change.

4. Have a match between the institution's vision and the community need (Navajo, Missouri, Delta)

Institutional engagement at the community college level, in general, appears to be easier to accomplish than at the university level. This is due a large part to the fact that community college faculty members tend to reside in the communities where they work and have a direct, vested interest in the welfare of the schools and communities. In addition, the missions of community colleges tend to be more directly related to improving the conditions of the local communities in which they are located, faculty members are not pressed to research and publish, and their traditions are more hands on (Lubec and Appalachia).

University-school-community partnerships are more successful and have greater impact when there are

- Mutual learnings and benefits for university, school and community partners (Maine, Navajo, MSTWI)
- Significant, multi-generational youth-adult interaction; (Maine, Navajo, New Mexico)
- New roles for participants—teachers as learners, students as teachers, parents as teachers and learners (Maine, New Mexico)
- Multiple institutions working together toward a common goal that speaks to their individual missions (Missouri, Maine, Kentucky, Navajo). This kind of partnership allows different institutions to focus on what they do best (e.g., Lubec with Washington County Technical College, hands on in the fish tank; University of Maine-Machais, teacher training and Suffolk University, research)

Enabling Institutional Engagement

Full institutional engagement would require action on several levels simultaneously and particularly within the higher education institutions themselves.

1. Entrepreneurial faculty members need release time from teaching and other duties or reduced teaching loads in order to build relationships and function effectively in partnerships with schools and communities.

2. Tenure and promotion policies need to reflect a commitment to institutional engagement, with service to communities and schools treated equally with research. This is especially important for teaching institutions where faculty members commonly teach four courses per semester, serve on at least two committees, advise students, and carry out other functions as well.

3. There should be flexible funding to support institutional engagement, especially to seed initiatives until they become institutionalized.

What the Rural Trust Can Do

Perhaps one of the most important commonalities across the six case studies is the presence and impact of an outside intermediary. In every case, the role of the intermediary is seen as crucial. The Rural Trust has been that intermediary with varying degrees of success, depending upon the nature of the partnership and the level of Rural Trust staff engagement.

In some instances, the Rural Trust has simply awarded a grant (Appalachia). In other cases, the grant has been carefully monitored (Mississippi) and interventions made as the need arose. In still others, the Rural Trust has taken a more hands-on position and actually facilitated activities and processes (Missouri). Potentially strong models have resulted from each type of engagement. Institutional change, however, has been easier to come by when Rural Trust staff have been more intimately involved with communicating directly with and getting support from university administrators (deans, provosts, presidents).

Our desire over the next five years is to

1. Refine and replicate selected models, including the Missouri ERZ model, the Maine collaboration, and the Mississippi Delta Writing Project.

2. Identify (or create in some instances) entrepreneurial units with higher education institutions to push for and champion institutional change and engagement with vulnerable youth through place-based education.

3. Provide high quality training and follow-up for teachers, higher education faculty members, youth and community members in the design, implementation and assessment of place-based learning.

The Rural Trust's work in the cases studied reached vulnerable youth because it was focused in regions where virtually all youth are vulnerable. In other places and working with larger institutions—University of Nebraska, South Dakota State University, University of Alabama—the record is mixed. Over the next five years, our strategic plan focuses our work in places like those in the case studies. Specifically, we will target our work in the Delta Region, the Northeast, Appalachia, the Southwest, the Plains and the Heartland, places where the work is certain to impact vulnerable youth.

Doris Terry Williams, Ed.D.
Director of Capacity Building
The Rural School and Community Trust

Revitalizing Economies Around Cobscook Bay

By Michelle Hynes

BEST COPY AVAILABLE

Introduction

Lubec, Maine, a small town of approximately 1,800 people, sits at the easternmost point of the United States. The town's economy has historically been dependent on the sea, with many residents working as lobster fishermen, scallop draggers, clam diggers or fish packers. Others are employed in education, health, social services, or restaurant and retail jobs that are tied to summer tourism. According to the 2000 U.S. Census, median household income is just over $20,000, with nearly one-quarter of households earning less than $10,000 in 1999. The percentage of families living in poverty (20%) is twice the average for the state of Maine. Lubec is located in sparsely populated Washington County, which has only 13 people per square mile. Isolated by poverty and distance, it is nevertheless a beautiful, scenic area with miles of coastline, rich natural resources and, as one longtime resident expressed, "a lot of heart."

Lubec has a K-12 consolidated school whose high school enrolls about 70 students. It sits across Cobscook Bay from Shead High School in Eastport, a town of similar size, which enrolls about 170 students. Both schools have been involved with place-based learning—particularly related to marine science—using community natural resources as a laboratory for engaging young people in research and planning. Lubec, through its involvement with the Rural School and Community Trust, created and has sustained a vocational aquaculture program that shows promise for creating new economic options through student-led, entrepreneurial projects.

The program developed in a rich statewide and local context, including Partnership Rural Initiative in Maine (PRIM)'s efforts to connect the Rural Trust's work to the Maine Learning Results; the findings of *Sustainable Maine*[1], a 1996 report linking the state's future to economic, environmental, and community development; and a federal Comprehensive School Reform Demonstration (CSRD) grant to the school district in Lubec. The aquaculture center, constructed by renovating an old sewage treatment plant building, represents a significant investment of time and tax dollars by local residents. Lubec High School (officially MSAD #19) now has the only vocational aquaculture program in the state.

In 2002, Lubec students raised tilapia, maintained a hydroponic greenhouse that recycles waste water from the fish tanks, farmed mussels, and sold bait minnows to local fishermen. According to aquaculture teacher Brian Leavitt, "[The students'] ultimate goal is to sell enough fish to make their project self sustaining. It's a huge goal but they really want to do it." They are also involved in a "drift study" in which Lubec and Eastport students work with local fishermen, the Washington County Technical College, Cobscook Bay Center, and national partners like the Nature Conservancy to collect data about three-dimensional tide circulation in the Cobscook Bay.

Lubec's focus and vision provide particularly rich examples of how schools, communities, and higher education institutions can work together to create "new options" for adolescents who have not been successful in traditional school settings. Their story emphasizes the interdependence of a variety of community institutions in a place whose way of life is threatened by a shrinking population, a changing economy, and conversations about consolidating small schools to gain economies of scale. In this way, the small community of Lubec reflects the struggle that Pam Fisher, a rural superintendent and co-author of the *Promising Futures*[2] report, expressed the following about the state of Maine:

> If kids could see themselves as viable citizens solving real problems in their communities, then they would have, upon leaving these communities, a clearer understanding of not only their sense of place but how they could improve their communities, work in their communities, or live in their communities as an adult

> citizen. And that is a very real identified issue for the state of Maine. Kids leave here. We've lost 27,000 students in the last 10 years in the state of Maine...We have retirees moving in and young kids moving out. We're losing our students.

While three-quarters of Lubec's adult population has at least a high school diploma, only 13 percent have earned a bachelor's degree. This reflects statewide statistics for Maine, which has a relatively high rate of high school graduation but a low rate of higher education completion. In the 1990s, Washington County had the lowest level of educational attainment in the state. Even those students who are accepted to and start college rarely finish. As Debbie Jamieson, a teacher who was instrumental in the early years of Lubec's aquaculture program, says:

> We set kids up, they get excited, they get accepted and then they get to a fairly large population and they don't have the coping skills to do well. So they run back home and they either don't go to school or they take a couple classes at a local college but it's not what they want, it's not what we wanted for them."

What makes youth "vulnerable" in rural Maine is not only poverty and distance but a lack of options—or perceived options—for the majority of high school students. Partnerships among schools, surrounding communities, and local higher education institutions can help to change this picture.

This case study examines the involvement of three higher education institutions—University of Maine-Machias, Washington County Technical College, and the Friedman Field Station of Suffolk University—with the vocational aquaculture program at Lubec High School and related place-based projects in communities around the Cobscook Bay. Descriptions of these institutions' collaborative efforts are based on information from two major sources: documents from participating institutions of higher education and approximately 15 interviews with teachers, education administrators, community-based organization leaders, and college faculty. The Rural School and Community Trust; two university-based intermediaries (the Partnership Rural Initiative in Maine at University of Southern Maine and Washington County Consortium at University of Maine-Machias); and two nonprofit organizations that were integrally involved with the university-school partnerships (Cobscook Community Learning Center and the Cobscook Bay Resource Center) provided background materials.

Engaged Institutions: Multiple Perspectives and Partners

The three higher education institutions involved with place-based learning in Washington County represent different types of institutions—an undergraduate campus of the state university, two campuses of a regional technical college, and the summer field research station of a Boston-based university. Through individual and institutional contributions, each has provided a variety of resources to support school-community partnerships that represent important opportunities for adolescents as well as their teachers and families.

A small campus of the state university, University of Maine-Machias (UMM) enrolls approximately 1,000 undergraduate students, and has about 40 tenured faculty. It is located in the county seat for Washington County, a town of about 2,500 residents. It originated in 1909 as the Washington State Normal School, a college of teacher education. The admissions catalog calls the campus "a place, a location, unlike any other." Current materials about the campus emphasize that it is "uniquely connected to the environment and the community" and that "the Downeast coastal Maine environment orients almost every program." Two newly-opened centers exemplify this perspective: one for early care and education

that is part of the university's Center for Lifelong Learning, and the Downeast Institute for Applied Research and Education. The early education center provides day care for the community and a learning laboratory for prospective teachers. The Downeast Institute, a university partnership with the Beals Island Regional Shellfish Hatchery, will, among other goals, "help foster stronger educational and economic linkages with fishing communities along the downeast coast." UMM professors, including Cyrene Wells in the department of education and Brian Beal in marine ecology, have contributed time and expertise to efforts involving teaching and learning in K-12 schools.

The Washington County Consortium, a nonprofit educational support organization led by Betty Jordan, is housed at UMM. The Consortium served as the administrator for Rural School and Community Trust grants to Washington County schools, including the aquaculture program in Lubec. One high school principal said the Consortium has been "instrumental in increasing the amount of professional development available to Washington County teachers." The Consortium is a key player in two efforts that are important to sustaining higher education partnerships with schools and communities: a monthly meeting that involves all county superintendents along with representatives from UMM and Washington County Technical College; and the Washington County Education and Economic Development Alliance, a collaboration aimed at improving delivery of educational, career, and technological services to area residents. The Consortium has also successfully pursued a number of federal grants benefiting Washington County schools, including Safe and Drug Free Schools, 21st Century Community Learning Centers, and a new partnership with the Regional Educational Laboratory at Brown University focused on adolescent literacy.

Washington County Technical College (WCTC) is one of seven technical colleges in the Maine Technical College system. The admissions catalog states that "WCTC's programs and services prepare and sustain a diverse student body as competitive members of a world-class workforce and contributing members of society." In fall 2001, the college enrolled 215 full-time and 230 part-time students, 75% of whom were Washington County residents. Sixty percent of students are over age 21. The college offers certificates and associates degrees, a number of which enable students to transfer to four-year degree programs at the University of Maine-Machias. The main campus is located in Calais, a rural community on the border between the United States and Canada. Calais is about an hour's drive from Machias along coastal Route 1, and nearly 90 minutes from Lubec. The Marine Technology Center, or the "Boat School," is located in Eastport. WCTC also has a small classroom facility in Machias, located in the same building as the county's Sunrise Economic Development Council, a key player in the Washington County Education and Economic Development Alliance.

Much of WCTC's involvement with secondary schools has occurred through the **Marine Technology Center,** which is only a few minutes from Lubec by boat, and about half an hour by car. Among its programs are aquaculture technology, marine technology, and boat building. WCTC also has programs in early childhood education and paraprofessional education that they hope to connect with the new early childhood center at UMM. WCTC is committed to creating seamless experiences for students from high school through college, working to create programs that allow students to spend two years in a vocational high school program, two years earning an associates degree, and two years as an upper-level student at a four-year institution.

The Friedman Field Station of Suffolk University is a 40-acre classroom and laboratory facility located on the Cobscook Bay in Edmunds, about a half-hour's drive from Lubec. The Field Station has faculty in residence from April

through October of each year. Approximately 50 students, faculty members, and staff membesr can be housed at the camping facility. Suffolk University offers college and graduate level courses in biology, botany, ecology, marine science and environmental science during the summer months. Other universities, schools, and community groups may also use the facility for a nominal daily fee. The Cobscook Community Learning Center has held several meetings and educational experiences at the field station, including a three-day training for high school students in landscape architecture. The Field Station also hosts the Audubon Expedition Institute master's program in Ecological Teaching and Learning, a program of Lesley University.

Two other community organizations have become intertwined with the school-university partnership efforts around Cobscook Bay: **Cobscook Bay Resource Center** and **Cobscook Community Learning Center (CCLC)**. The Resource Center's mission is to "encourage and strengthen community-based approaches to resource management and sustainable economic development in the Cobscook Bay region, the Bay of Fundy, and the Gulf of Maine." Brian Beal, a science professor at UMM, and Scott Fraser, a faculty member at the WCTC Boat School, are on the board of directors. The Resource Center has been a partner in the drift study of Cobscook Bay; it is highlighted on their Web site as "community-based research." The Cobscook Bay Resource Center also commissioned written documentation of marine science curriculua created by several area teachers. Shead High School students were involved last year in collecting and analyzing data that are being used for research and decision-making purposes. Lubec students are getting involved in the drift study this year as well, using hand-held global positioning systems (GPS) to collect data that are downloaded into mapping software.

The CCLC is a grassroots community effort, initiated in 1999, whose mission is "to enhance the lives of local community members through grassroots collaboration using the arts, the rich social fabric, and the natural surroundings as the medium." The CCLC is a multi-generational effort, representing the diversity of the region's population. Young people, including high school students in Lubec and Eastport, have been involved in significant ways in the center's programs and planning. The Lubec high school project has already become a linchpin connecting school and community. The CCLC is very interested in alternative ways of learning, in settings that honor what youth and adults know and can do.

During summer 2002, the CCLC hired eight students (from Shead, Lubec, and Calais High Schools) to learn about landscape architecture, conduct a planning study of the site for the first CCLC building, make recommendations to the CCLC's board based on a student-designed, three-dimensional model, and clear the land where the building would be located. The Suffolk University field station served as a host for meetings and trainings. The CCLC has also reached out to Lesley University to create a Washington County-based master's program that enrolled its first class in 2002. While the CCLC is new, the ways it is involving youth, adults, and community resources—including higher education institutions—show significant promise for creating learning opportunities that are responsive to local needs.

Lubec and Beyond: How Partnerships Are Making A Difference for Students Around the Cobscook Bay

University, School, and Community Connections

The aquaculture program at Lubec High School began in 1996 with a grant from the Annenberg Rural Challenge (the Rural School and Community Trust's predecessor), becoming a

collaborative effort among middle and high school teachers, the Boat School at Washington County Technical College (WCTC), the director of the Friedman Field Station at Suffolk University, and various local businesses and community members. Debbie Jamieson, a science teacher in Lubec until 2001,[3] says of their beginnings:

> We all had a very small pool of money and a directive from the Annenberg Foundation to make it a sense of place and community. And when I was in Lubec and looked around, I thought, "I've got the ocean on both sides of me, we've got farmers learning aquaculture ... wouldn't it be neat if we could do something that's real, that's not a canned experiment, that makes sense to these kids.

It made so much sense that a small town with limited resources donated a building adjacent to the school, voted to allocate $15,000 from the town's budget, and volunteered to provide planning assistance and labor to the renovation effort. Students helped to build the center, along with their industrial arts teacher. After visiting the New England Aquarium and seeing a hydroponics greenhouse, a Washington County expert helped build one for the aquaculture center, recycling water from the fish tanks, providing an environmental learning lab, and growing basil and tomatoes that students could sell to the local grocery store. (The current aquaculture teacher, Brian Leavitt, posits that if taken to scale, income from the greenhouse alone might sustain the program.) Several adult education students who needed a science class to complete high school came in and took classes alongside the high school youth.

Assistance and expertise from higher education institutions were invaluable. While the early connection with University of Maine-Machias was primarily through the Washington County Consortium, faculty at Washington County Technical College and the director of the field station were more hands-on.

Jamieson says:

> WCTC Boat School was absolutely phenomenal. Every time I picked up the phone to ask a question they came in ... They brought salmon for my kids to dissect, helped us investigate, for example, "Why does this one have a bent kidney?" They brought all these fish in ... I wouldn't have access to that. Plus, they're experts. I could watch and learn right along with the students. It wasfantastic. They took us on boat rides across the bay, back and forth. We would be out there when they were collecting urchins—which is a delicacy—and they would show us how to open them up and find the roe. Was it good roe! We did urchin feeding experiments to see what you could do to manipulate them to increase that product. Just the idea of housing a marine organism and changing the water, and feeding them ... that whole process was a real learning experience for students.

WCTC also hosts an annual Marine Science Conference that serves as a professional development opportunity for teachers.

Suffolk University's Friedman Field Station also provided both hands-on expertise at the school, and broader learning opportunities. According to Jamieson:

> For two summers in a row, Maine Community Foundation sponsored a community awareness program. Each day we would do something different for teachers and students, probably the first time we've allowed teachers and students to work together and learn together that I can ever remember. And we held it at Suffolk University and we studied the ecosystem around Cobscook Bay. We went out to visit the salmon pens; we looked at the watersheds, we did intertidal zone

> walks. . .teachers at different levels around the Cobscook Bay, even our Industrial Arts teacher.

Of Carl Merrill, the Field Station's director, Jamieson says, "That professor was fantastic. Everything he did was free. He'd come here and spend hours with us. It was an amazing gift."

Francine Rodman, education coordinator for the Field Station, provides insight on what this kind of exchange with schools can bring to higher education institutions. Speaking about her experience, she says:

> I came into the field station as a hard scientist and have shifted my views quite a bit based on what it means to live and work in a place and share limited resources ... Field Station living ... really shift[ed] my educational philosophy, and education in the broadest sense being what it means to be a resident on this planet and sharing those resources with other people.

Rodman also had the opportunity to work closely with several of the students in Lubec's aquaculture program as part of a community seminar. Her comments emphasize the shared learning experiences that can occur when the context allows it: "It was amazing because I thought, 'What can I share with these kids who have grown up here, what can I show them that they haven't seen?' And it turns out that there was a lot. But it also turned out that they could show me quite a bit."

Darin McGaw, interim vice president at WCTC, expresses an institutional perspective about the importance of connecting high schools and technical colleges. High school programs, he says, are "part of an aspirations piece." He continues:

> If young people are working in the industry, seeing the scientific aspect of it...The industry is going through an evolution right now from hand feeding to computer-controlled feeding. And so their [entry-level] employees need to know how to run a computer, they need to understand some science and some math around fish breeding. These students at Shead, at Lubec, who are learning this up front, will be the future employees that can understand and can better that industry...We need to be prepared to jump in and provide that next level of training. We can get them to an associate degree level so they can either go to work as computer-savvy, science and math savvy technicians, or we can move them on to the university to become marine biologists.

Brian Beal, associate professor of marine ecology at the University of Maine-Machias (UMM), exemplifies the synergy that can occur when higher education institutions are engaged with communities and schools. A Washington County native who earned his bachelor's degree at UMM, he is intimately connected to "place." His first professional position at UMM involved helping pre-service teachers in the Education Division incorporate information about the environment into their curriculum. Currently, a unique faculty appointment allows him to spend half his time teaching, and the other half on marine research. With his schedule, Beal says: "I can find myself at one minute teaching a course in marine ecology to juniors and seniors, but when that class ends I've got an appointment to go and talk to the local kindergarten class about how a clam breeds."

His projects have ranged from helping a group of local fishermen start a lobster hatchery that would enhance the local lobster population, to reseeding clam beds around the Cobscook Bay (with both college and high school student involvement), to helping with the Cobscook Drift Study, to his current leadership of the Downeast Institute for Applied Research, a partnership with the Beals Island community. Beal cites three major factors that make his approach successful. First is his

connection to the local community ("I think a lot of it has to do with growing up here. I was a lobster fisherman, and I was a clammer"). Second is his eagerness to learn ("I challenge my students, I challenge myself, and I challenge what I read and hear ... Part of what I do is to not sit in my office and write research articles. I sit in my office and write grants and come up with projects that will hopefully advance what we do, what we learn"). Finally, is the size and nature of UMM ("If I were at Orono, or Bowdoin, or Cornell, this wouldn't happen ... My colleagues are wonderful in that my position has never been 'publish or perish.'").

Cyrene Wells, associate professor of education, expresses a different perspective about the nature of faculty work at UMM. While she enjoyed working with Beal on a collaborative project at the Fort O'Brien School (an elementary school involved with the Rural Trust's place-based projects), her time off campus was made possible by an outside grant. Nearly all professors teach four courses each semester, leaving little time for outside partnerships. Education faculty supervise student teachers, and are in schools each week as a result. Informally, they lend expertise to practicing teachers in the county, many of whom are UMM graduates. However, the lack of a graduate program (teachers must go to the main campus at University of Maine-Orono for graduate credit), the limited availability of adjunct faculty members, and shrinking state budgets make it difficult to do more. Nevertheless, Wells tries to stay connected to area schools. As the director for the teacher education program, she also serves as UMM's link to the Washington County Consortium. As part of a state grant for school improvement, she serves as a consultant one day a week at Lubec High School, coaching teachers in writing instruction. Wells funnels the money from consulting fees and summer writing conferences into a sustainable line item in the university budget that can be used to fund teacher research groups, classroom materials, and other "school partnership" activities. Like Beal's faculty appointment, this ongoing line item—not erased at the end of each fiscal year—is a university anomaly, yet one that has survived several years and multiple university presidents.

The relationships among entities that have supported the development and sustainability of the vocational aquaculture program in Lubec, along with other place-based efforts, are complex and overlapping. For example, two members of the board of the Cobscook Bay Resource Center are also professors at local higher education institutions. The director of the Cobscook Community Learning Center is also the coordinator for the gifted and talented program at Lubec High School. The education coordinator at the Friedman Field Center recently began teaching a chemistry class at Lubec High School, which had not had a chemistry teacher for several years. This same individual is involved with the "core group" of Cobscook Community Learning Center, and taught a course for high school students and adults last summer. Lubec's aquaculture teacher, along with the principal from Shead, the director of the CCLC, and representatives from UMM and WCTC, served on a committee for the Washington County Education and Economic Development Alliance to make recommendations for vocational and adult education. Several educators—including Lubec's superintendent and the marine ecology professor at UMM—mentioned that they had previously worked as fishermen or clam diggers, connecting them to the parents of their students and giving them a deep understanding of and respect for the local economy.

Schools are connected to each other as well. The principal at Shead High School is studying for her superintendent's certificate; she will cross the bay to intern with Lubec's superintendent next semester. Following a year of budget cuts, Lubec and Shead are sharing a Spanish teacher, using distance-learning technology to reach across the bay. Shead's principal expressed interest in finding ways for the two schools to share more resources in ways that benefit their students and allow both

communities to keep their own high school open. Stephanie Allard, a science teacher at Shead, is interested in designing a Web site or using other technology for students in Eastport and Lubec to exchange information about their respective aquaculture programs. Time and distance, however, remain barriers to closer connections between educators already juggling multiple roles.

Few of these relationships, however, appear to be formal "partnerships." Many are dependent on the commitment and passion of an individual, and his or her own connection to place and community. Yet the individuals who represent Washington County's institutions—schools, higher education institutions, grassroots organizations and community intermediaries—appear to work together in ways that suggest they understand their interdependence and are trying to forge a sustainable way of life for youth and adults alike.

Alignment With New Options Principles

Higher education involvement with Lubec and other place-based projects around the Cobscook Bay has been driven primarily by interests that teachers or community members express. Contributions range from the deep involvement with Lubec that Debbie Jamieson described, to the simple use of a facility at WCTC where Shead High School students could safely apply fiberglass paint to a boat. Several higher education representatives directly commented on this service-driven approach. For example, Darin McGaw of WCTC described the college's role, in part, as "to work with local schools and local businesses to find out what's needed" and "to be a center for the community" in terms of the use of college facilities. Francine Rodman, of the Suffolk University field station, expressed a desire to "fill in the gaps that the teachers have identified ... using the resource of the field station to address the needs that are identified by the teachers themselves." Of his many community-based projects, Brian Beal says, "I try not to impose myself. If things are going to go smoothly, oftentimes it is because they do the initiating."

Institutions of higher education benefit from these relationships as well. Indeed, representatives at UMM and WCTC alluded to an institutional belief that participation in school and community life is integral to their growth. In describing his colleagues' acceptance of his unique research appointment, Beal says:

> What we want is that when people think of 'marine' they'll think of UMM. When I go out I'm representing UMM. And so it's an extension of the university. When I'm out on the clam flats people know that I'm there either to learn, or I'm working with someone else or doing some research.

This reinforces community acceptance as well: "I'm not competing with them for their livelihood. And that's important. That also goes a long way in developing this trust that hopefully I've created and continue to create."

Darin McGaw makes a similar statement about his involvement in the Washington County Consortium, which connects WCTC with area schools and with UMM: [The president says that] "the college needs to become an active member in the Consortium. We need to start attending all the meetings, we need to be a voting member, we need to pay attention to what's going on there and we need to help in the process and play our part." Attendance at the Consortium's monthly meetings also "keeps the college in the mind of all the other folks there."

Making A Difference for "Vulnerable Youth"

Educators and community members cite a variety of factors that make Washington County youth vulnerable: lack of parent education that affects attitudes toward college; the absence of youth activities or social services, contributing to drug abuse and other risk behaviors; distance and transportation issues; and family poverty and the depressed economy of the region. All agree,

however, that the aquaculture program in Lubec as well as place-based activities in Eastport and through the CCLC have made a difference. Scott Porter, Lubec's superintendent, says that parents "know that [the aquaculture program] keeps students who might not be here engaged in the school." Brian Leavitt, the program's teacher, mentioned several students who were "the most rambunctious students I ever had" or another who has "been absent more times than he's been here" who are now interested and engaged in their work and their goals. Leavitt also says that he sees academically successful and special education students working side by side, "seeing the lower level student helping the upper level student. ... We do math and English and reading out there [in the aquaculture center] but it's a different approach."

Debbie Jamieson affirms this from her own experience:

> Just to get out there and to see kids who do not learn...discipline problems, having a hard time...get up and takecharge...'Oh, I can do this'...that, to me, was amazing. You give them an opportunity in another setting to show what they can do. Kids who have a hard time reading don't necessarily have a hard time comprehending an application.

Jamieson, like Leavitt, speaks of students' accomplishments with pride:

> Some of these kids, you need to realize, they would have dropped out of school. The students in particular that just graduated last June were headed in a bad way in ninth grade. And some did take some time off and came back, and were successful enough to get their high school diplomas. And for them that was a major accomplishment.

Alan Furth offers an observer's perspective: "The aquaculture program is a great example of getting kids out, of putting them into a place where you bind education with their interests and strengths in meaningful work. You will find students who are engaging, who are respectful, who are responsible...Many of those same students [in traditional classes] will create a lot of problems, will come up against a lot of walls."

Francine Rodman offers a similar evaluation of the summer landscape architecture program sponsored by the CCLC:

> Some of the things identified by CCLC are alternative education options. For instance, summer school options, fitting or designing programs that are going to fill the needs of kids that didn't succeed in the traditional classroom. What's interesting is we want to offer alternative style for all students. The landscape architecture course is a great example of that. The need was that the CCLC had a piece of property that needed some work. It would have been relatively easy to hire people to come in and do that. But what a great learning opportunity standing right before us. So the need was identified and the program was developed. For us that was a really big step to expand to the other schools around the bay, to become involved with Eastport and Maine Indian Education, to expand beyond the Lubec area while serving Lubec students.

Results of Youth Engagement

Evidence of the aquaculture program's results is still anecdotal. The goal, Brian Leavitt says, is "to keep kids in school, keep them engaged, keep them interested, provide the best education we can, take advantage of the way they learn best." Observations suggest that for the students it serves, the program is reducing dropout rates, increasing attendance, and contributing to school success. Along with the marine science program in Eastport, it is also raising aspirations and encouraging students to set goals for their school

experience and beyond. Leavitt's description of students' desire to raise the $60,000 a year it would take to make the aquaculture program self-sustaining is one example. Jamieson, whose goals included connecting students' experiences in class to the local economy, would be proud:

> Being able to show kids how to be entrepreneurs in a depressed area, that was really one of my biggest things. Growing basil in the greenhouse, we sold it to the local grocery store. What can we do that you could leave here with a skill, and have a job, and be able to live in Washington County? If you could be an entrepreneur, you could create a job for yourself and maybe somebody else. From my point of view that was really important.

Jamieson also talks about the effect the program has had on students' higher education goals:

> The aquaculture program in Lubec opened eyes for some kids—either they wanted to be traditional fishermen or they didn't. It allowed some students to realize they wanted to go to Maine Maritime Academy and look at marine engineering. In fact, in the past four years we've had six students be accepted to that college. And they've been successful and they've stayed. That's the key.

Stephanie Allard, science teacher at Shead High School, relates similar experiences with students in Eastport:

> A lot of the college-bound kids have gone on to study marine biology; for the kids that don't necessarily go on, it helps them to have a sense of place and a lot of them will stay around here and work in these various industries that we've discussed in the class—clamming or fishing or working in aquaculture.

Elements of Successful Youth Engagement

What has made the programs in Lubec and others around the Cobscook Bay successful? The word "real" is the one most frequently mentioned by those involved. Scott Porter summarizes this point of view

> I think the success of it is that they see it as being very relevant. They are doing tasks that people are being paid to do here in this town...With students who aren't that academically inclined they are always grasping for why am I doing this, why am I learning this. With the aquaculture program they see directly why.

Of her marine science class across the bay, Allard says, "Kids want to study stuff and learn about stuff that's real. They don't want to do some activity just for the sake of doing it. It doesn't make sense to teach that way." Of students who were re-engaged in school through the aquaculture program, Jamieson states:

> It was because they could spend three hours or four hours a day, doing something with their hands, that made sense... and not sit in a traditional classroom. If they had had to sit in a traditional classroom they would not have come to school. That makes that program successful.

Leavitt cites the hands-on nature of the program, and also says simply: "Students are just excited about it... and that's what school should be. It should be exciting for students."

From interviews with others, it is clear that partnerships among schools, universities, and community organizations are giving students real work to do, with real responsibility for results. Data from the drift study, collected by students with support from university researchers, are being used by local fishermen as well as national organizations and federal agencies. Lubec's

aquaculture program teaches students a variety of skills they are using not only in the classroom, but in school-based business ventures and community research as well. Students in Eastport are collecting data for the Eastport Clam Committee, a local conservation and resource management agency. Summer efforts by the CCLC used information and observations from students to make lasting decisions about land and buildings that would be used by community members around the region.

The vision of the community's leaders also contributes to the program's success. Debbie Jamieson's emphasis on students' options beyond high school for college or work, Brian Leavitt's connections with local industry and focus on doing "what works" to engage students, Stephanie Allard's clear commitment to hands-on teaching, the involvement of school, university, and community members in efforts to link education and the economy, and the resources committed by Lubec's residents and their neighbors are all elements of sustaining high-quality education that makes a difference for youth and the place where they live.

Promising Practices and Recommendations

The experiences of Lubec and Eastport point to several "promising practices" that higher education institutions can emulate, as well as other ways in which schools, universities, and community members can work together to create high-quality learning experiences for students outside traditional classroom structures.

One important factor is the role of intermediary agencies in brokering this relationship. Jamieson explains the role of the Washington County Consortium : "The consortium funneled the money that Annenberg gave out. Over three years we got $15,000—it was like a gold mine. You could spend it on anything you wanted, the flexibility was really nice." As Cyrene Wells' effort to create a "sustainable" line item for school partnerships at UMM indicates, state-funded institutions sometimes lack this flexibility, especially for small purchases like classroom supplies.

At the same time, it is clear that the expertise and resources that universities and colleges can bring to schools are unique and badly needed. Both Jamieson and Leavitt cite their connections to WCTC's Boat School as important to their own knowledge as well as to students' learning. The real data collection and analysis that students have done with the drift study and with local shellfish populations could not have been accomplished without the rigorous research design and guidance that Brian Beal provides. Cyrene Wells, only an hour away from Lubec, brings consistent expert coaching to teachers that enhances their professional development. Suffolk University provides a local laboratory and learning center that bridges university and community perspectives on the Cobscook Bay environment.

Beyond students' high school experience, bringing students to the university and encouraging the faculty to come to schools can change expectations and aspirations for higher education. Over time and with a focus on place-based learning that gives back to the community, it can change both parents' and students' assumptions that higher education will take them away from Washington County and from Maine.

The Cobscook Community Learning Center, while new, also points to promising practices in adult and multi-generational education through its efforts to provide alternative settings for learning and its outreach to the Lesley College graduate program.

Deeper institutional connections, however, are needed both to evaluate current programs and to bring programs and partnerships to scale. While efforts in Lubec and Eastport have, as Scott Porter says, "really changed some lives," they have not changed teaching and learning overall at the university or the school level. Betty Jordan at

Washington County Consortium suggests that the new adolescent literacy program has begun making a difference for teachers, and will begin to change outcomes for students as well. Cyrene Wells envisions closer partnerships with superintendents and principals that utilize school administrators as adjunct university faculty members, enabling permanent faculty to spend more time in schools. Changes in teacher education programs, more robust articulation agreements among different types of education institutions, and flexibility for faculty at small institutions that mimics Brian Beal's unique opportunity to split his time between the university and the surrounding community are all still to come.

National and regional funders and policy organizations can encourage richer connections through targeted funding to universities and intermediary agencies, dissemination of "best practices," and incentives for multi-sector collaboration. Further, both Maine and Washington County provide examples of the ways in which state and regional entities can encourage new outcomes and ways of working through sponsoring task forces, setting goals, and passing legislation that explicitly links students' school success to larger community outcomes.

Endnotes

1 *Sustainable Maine: Integrating Economy, Environment, and Community.* (1996, 2000). Maine Center for Economic Policy. Out of Print. Contact www.mecep.org.

2 *Promising Futures: A Call to Improve Learning for Maine's Secondary Students.* (1998). Maine Commission on Secondary Education, Maine Department of Education.

3 Debbie Jamieson now teaches science in Pembroke, another small town in Washington County.

Crossroads:
Promising Practices of Change in the Mississippi Delta

By Jereann King

BEST COPY AVAILABLE

Just as the Delta can be rich and fertile, it can also be poor and desolate; just as one can hear the powerful chords of humanity's best music there, one can also witness Delta nights of terror and inequality; just as natural resources are abundant, so can everyday life be harsh. But in each of the extremes is a powerful culture.

Tom Rankin
"Cane Brakes, High Water, Drought:
The Mississippi Delta"

Introduction

The Mississippi Delta is geographically defined as the flat plain area confined by the contours of the Mississippi River to the west, the Yazoo River to the east, Memphis, Tennessee, to the north, and Vicksburg, Mississippi, to the south. Historically, the region has seen its share of ups and downs, justice and injustice, progress and setbacks. There is little wonder that the Mississippi Delta is the birthplace of American blues. As an agricultural sweet spot, Delta planters brought large numbers of enslaved Africans to work the fertile land, transforming the region into a viable economy. The arduous work of clearing land, planting, and harvesting was accompanied by the slaves' field hollers and shouts. The expressions became the musical foundation of the blues. And like the blues, the Mississippi Delta's rich beauty is filled with contradictions, double entendres, and a painful legacy of oppression.

High concentrations of African Americans remain in the region today, making up at least 60% of the population in most areas. The Mississippi Delta Report issued by the U.S. Commission on Civil Rights in spring 2001 noted that the Mississippi Delta remains one of America's most troubled regions. While some improvements have been made, the region still has one of the highest levels of poverty in the nation, worsened by educational inequities and inadequacies, low school performance, and continuing problems with voting rights and political representation.

This case study examines the engagement of one higher education institution with five Mississippi Delta schools in an effort to improve academic outcomes for the area's most vulnerable students. With funding from the Annenberg Rural Challenge, the Delta Five Cluster sought to use their local place and place-related content to create learning experiences that would engage its K-12 students at a deeper level and raise the level of achievement as measured by state-mandated tests. With the focus on improving writing skills in particular, the Mississippi Writing and Thinking Institute (MWTI), based at Mississippi State University in Starkville, Mississippi, was invited to provide staff development and technical support for the project's teachers.

This document includes: (1) a general description of the Delta Five's place-based learning project goals and activities; (2) the stories and reflections of the project's major partners; and (3) an analysis of project data based on successful change characteristics.

The data gathered for this study were obtained primarily through interviews with the major partners: Barbara Poore, Heartland steward with the Rural School and Community Trust; Mississippi Writing and Thinking Institute staff; staff development consultants; and a superintendent, a principal, and teachers from two participating school districts.

The People, the Place, the Partnership

On the surface, the Mississippi Delta is not unlike rural and agrarian communities seen throughout southern Alabama, Georgia, and South Carolina. What stands out, though, are the miles and miles of harvest-ready cotton fields and the haunting remnants of sharecropper and tenant farms.

The school districts in the Delta Five Cluster are within a 40-mile radius west, north and south of Greenville, Mississippi, the heart and soul of the Delta. The Delta Five Cluster school districts—Hollandale, Leland, Shaw, South Delta, and Western Line—are located in Bolivar, Issaquena, Sharkey, and Washington counties. The Delta Five Cluster area covers 2,441 square miles and has a combined population of 115,706 people. The area's economy remains agriculturally based, with cotton and soybeans the principal crops. Unemployment rates are high, educational achievement levels, low.

In the 2000–2001 school year, the Delta Five Cluster consisted of 19 rural schools, 484 teachers, and 7,367 students. Eighty-two percent of the students were non-Caucasian and 89.7% (6,606) qualified for free and reduced lunches. These school districts are small, rural and poor; their children are extremely vulnerable.

The five Delta superintendents came together during the 1998–99 school year to form the Delta Five Cluster. At that time, the formation of the collaborative was not motivated by any particular project, but by the need for an association that might impact the districts' common issues and concerns. Charles Barron, superintendent in the Shaw School district and primary organizer and leader of the cluster, was keenly aware of the need for collaboration among poor school districts. He says:

> We know that collaboration is the key to a lot of things especially when you cross county lines and school districts. Anytime you can get five superintendents to sit down and discuss anything or agree on anything, you are batting a thousand.

So, five superintendents agreed to form the Delta Five Cluster, taking a more proactive stance to collaboration. Charles Barron, negotiating and articulating a vision for the cluster's work, stepped boldly to the plate in a leadership role.

The Rural Trust, having provided initial funding to the group, invited the Mississippi Writing and Thinking Institute (MWTI) to provide technical assistance to the Delta school districts. Housed at Mississippi State University, an 1878 land-grant institution, MWTI was established in 1985 in the university's Department of Education and modeled after the National Writing Project's university-school partnerships.

Although recognized by the NWP, MWTI is an independent organization, supported by public and private funds as well as contracts and subcontracts. Collaboration and partnership building are core values of the organization, which provides professional development opportunities to K-12 teachers. Dr. Sherry Swain is the director of the MWTI and Suzanne Thompson is a lead trainer. Kay Sullivan and Wendy McCurtis were teacher consultants with Suzanne Thompson in the Delta project.

The partnership between the Delta Five Cluster and MWTI was contractual. MWTI services included professional development workshops, classroom demonstrations, teacher and student leadership meetings, assistance with curriculum alignment, and summer institutes.

Place-Based Education in the Mississippi Delta

Charles Barron clearly expresses the need for place-based education when he says:

> So often we teach these children that everything about where they live is bad—no jobs, no industry, not a lot of education, the school districts are poor, the towns are poor—and that is what we have been teaching them.

Once the Delta Five Cluster was formed, Barron talked with Annenberg Rural Challenge representatives about funding for a project that would combine local culture, teaching and

learning. The Cluster submitted its initial proposal during the 1998–1999 school year. According to Barbara Poore at the Rural Trust, the project was funded primarily because it was based in the Delta where there was a great need and there was interest in place-based learning. The foundation was interested in expanding its funding and making a difference in rural Delta communities, and the Delta Five Cluster wanted a vehicle to infuse Delta culture into the educational process.

While the Delta Five Cluster was preparing the Annenberg project proposal, the Walton Foundation, which shared Annenberg's interests in the Delta, visited the region and met with the Delta Five Cluster superintendents. The Cluster needed matching funds for the Annenberg grant, so the Walton Foundation encouraged them to submit a proposal that would fund community learning resources centers in each of the five districts. The Walton grant would support facility renovations, equipment acquisition, and a staff position for each center. That staff person would coordinate educational activities and events that would involve parents, students, and other community members. It was an important opportunity and a good match for all parties involved.

The place-based work was organized around four goals:

1. Involve students in learning about their culture and ways to preserve the area's rich heritage, thereby instilling in them a sense of pride for their cultural legacy.

2. Involve the school and community as partners in student learning and utilize teaching and community partnerships to promote place-based learning and cultural pride.

3. Infuse a sense of pride for the area's local agricultural history and recognition of the potential that agriculture has for providing area employment.

4. Assist administrators and teachers in recognizing and developing opportunities for place-based learning that is aligned with Mississippi's curriculum standards.

Planning and staff development for the place-based project were scheduled to begin early in 2000. A Cluster hired a staff person to coordinate Cluster activities and the place-based learning project. In retrospect, all of the partners agree that the lack of clear communication hampered the project's progress for the first year. How would teachers begin to integrate Delta culture into classroom activities? How would new kinds of activities help children meet mandated testing requirements? What were the cluster coordinator's responsibilities? How would project outcomes be documented? Who would be responsible for documenting them? How would grant funds be managed? And the obvious question: how would the project meet its overall goals? The ambiguity about structure and process was overwhelming.

The cluster coordinator took an approach to infusing culture into the curriculum that was unacceptable to the rest of the partners. One project partner explained that the coordinator saw the initiative as an arts project:

> So what she had done was scheduled all of these field trips for the kids. They would go to this museum and then go to that museum. There was nothing tying it all together and this person—just to be honest—was throwing some stumbling blocks in our way.

The coordinator was unable to get the project, as it was envisioned, off the ground. Barbara Poore, a Rural Trust steward, saw the project struggling. The Annenberg Foundation had made previous grants to the National Writing Project and was excited about their work, so Poore began to

investigate the work of the Mississippi Writing and Thinking Institute, an affiliate organization, with an eye for possible intervention in the Delta project. After talking with Sherry Swain, MWTI's director, and gaining a better understanding of MWTI's work, Poore suggested to Charles Barron that the Delta Five Cluster use part of its Rural Trust grant funds to support MWTI's involvement in their place-based work, specifically to provide intensive staff development for the teachers. This was an extremely complicated move for both Poore—suggesting to a grantee how they should spend their money—and for Barron, who had to make sense of the suggestion for himself and convince the other Cluster superintendents that involving MWTI would be beneficial for the project. On all the superintendents' minds were questions about MWTI's work and how their approach would result in increased student scores on mandatory tests.

MWTI wanted an approach to staff development that was participatory and that revolved around establishing school-based leadership teams. Much of the structure had to be designed, but MWTI knew that an important step was introducing the concept of place-based learning to the teams and getting them up to speed so that they would be able to lead and support their colleagues. MWTI, with the input of the teams, would plan a series of workshops and institutes to extend the project to all faculty members at each of the schools.

The decision to bring in the MWTI was a major hurdle in what was becoming a race for getting the project on track in a short amount of time. The 2000–01 school term had already started and it was November before Barbara Poore, Mississippi Writing and Thinking Institute staff and consultants went to the Delta to meet with the superintendents and the teacher leadership teams. They met in the Leland Community Learning Resource Center to begin the difficult task of charting out new plans for carrying out the place-based learning project, this time with a more systematic and intensive staff development component. All of the parties found themselves negotiating new roles.

It was at the fall 2000 meeting, the point in the project when MWTI became involved, that Charles Barron began to see some fragmentation among the Delta Five school districts. He says:

> Well, at that time all of these school districts are in the middle of reform. They didn't have time. That's why you find that it is fragmented. All of the school districts did not become involved in the MWTI efforts because they did not have time. They had too many things on the table and too much on the plate, and our director chose to resign rather than change the focus of the project.

The Cluster held to the original vision and moved the project forward as best he could without a Cluster director, relying on MWTI's expertise in staff development and experience in collaboration.

Mississippi Writing and Thinking Institute Steps In

The Mississippi Writing and Thinking Institute had extensive experience with collaborations and professional development programs focused on teaching the writing process. They also had worked with school districts to design whole school reform based on the writing process. Interestingly, what they were being asked to do in the Delta with place-based learning was different from any of their previous experiences. Sherry Swain had this to say about the invitation from the Rural School and Community Trust:

> The Rural School and Community Trust asked us to do something that we didn't have totally figured out. We like it when people ask us to do that because it gives us a chance to grow.

Suzanne Thompson, Wendy McCurtis, and Kay Sullivan, the team of teacher consultants for the Delta project, began their work. They had research backgrounds and tremendous experience training K-12 teachers in using the writing process. More importantly, for the Delta work, they had the ability to recognize and accept ambiguity. Their deep commitment to creative writing, teaching and learning would serve them well throughout the project. Somehow, they had to marry the writing process and the place-based learning approach. There was absolutely nothing easy about their tasks. How they would teach the classes and model place-based learning had to be created as they went along. The consultant team understood that the project had to be aligned with the Annenberg and Walton funded project activities and, somehow, had to help teachers meet Mississippi Department of Education benchmarks.

The project proceeded. Thompson, McCurtis and Sullivan began to meet with the leadership teams in each of the schools. Even scheduling these meetings was problematic. It was November; the school year was well underway. Teachers and students had found their daily and weekly rhythms, and the school calendar had already been set.

The consultant team created a step-by-step process for the place-based work and for their interactions in the Delta School districts. The plan included the following:

- Meeting with district supervisors, principals and teacher leadership teams to inform them of the type of work that aligns itself with the local community and the schools involved, through the writing process
- Describing the four main goals of the project and its connections with national and state standards and benchmarks in all grade and subject areas
- Guiding participants in developing an umbrella idea or theme for having students create their own approach to the big idea (this included creating rubrics for writing and writing styles)
- Developing timelines for teacher and student leadership team meetings, conferencing, classroom demonstrations, focus groups, etc.
- Facilitating discussions with leadership teachers and their teams to formulate their umbrella plans and show how subject area standards and benchmarks could be approached in the work while making sure the project goals were considered
- Facilitating discussions for participants to decide what kinds of products would come from the work—essays, narratives, videos, CD recordings, performances, displays, books, open house—and how the work and products would be assessed

Along with scheduling and other time commitments, the consultant team needed administrators to agree to provide substitute teachers throughout the year so when a classroom demonstration was being conducted, other teachers on the team would be able to observe the process.

The work began during the winter semester, January 2001, with only two middle schools, Leland and Chambers. Although all of the superintendents and principals expressed sincere commitment, the project continued in a "hit-and-miss" fashion. A tumultuous beginning and a number of events impacting work relationships and dynamics haunted the project's efforts. Oftentimes, the consultants would call the schools to say that they were coming for an already scheduled meeting only to be told that the meeting had been changed or cancelled.

There were other challenges, including stoppage of the work in one school because students were practicing for the state-mandated tests. In another instance, none of the 17 teachers who had confirmed their attendance at a MWTI sharing and networking meeting of rural teachers in Orange Beach, Alabama, showed up. The consultant team was baffled. Suzanne Thompson explains:

> We had 17 commitments and we called all of the folks who had made those commitments as we realized they were not coming. The reasons they gave were things like at the last minute their families had things that came up or they just decided that they didn't want to travel. Nobody had died or any serious things. Nobody was even sick, that I know of. And we called them, they did not contact us. It was very discouraging because it would have been a wonderful learning opportunity and networking opportunity.

The 2001 summer institute brought new life to the project. Sherry Swain says:

> The first time that I felt really good about it [the work] was that first summer institute in the summer of 2001. They had this summer institute and there were teachers there from every one of the sites for a whole week.

The summer institute provided the time and opportunity for teachers to meet each other and for the consultant team to explain the project goals and intent. Until that time, Suzanne Thompson believes, the teachers did not fully understand the aim of the project.

> First of all, from the very beginning, no one had been given a reason why they should be going to these meetings or participating in these meetings. Internally, their districts had not told them that they were going to be part of an initiative that would carry them through three years of time, there would be outcomes and projects, and reports. None of that [information] was on board. We told them that. We helped them to get that big picture, we as technicians, as consultants. We helped to get a broader understanding of really what the work was calling us to do. We introduced the whole idea of place-based learning and all of that.

Shiquita Sutton taught language arts at Chambers Middle School. She had been interested in the place-based learning project when she first heard about it but was unable to attend any of the meetings until the 2001 summer institute. She tells this story about her experience:

> In summer 2001, we attended a summer institute that was based on the Delta Five Schools planning a project that would be carried out and extended throughout the school year. Each school had to come up with a project with the kids, making sure that the overall thing was reaching out to the community and so our school came up with the idea of having a cultural fair.
>
> The leadership team consisted of six teachers, and the teachers ranged from every subject area. We had to complete a matrix and the matrix outlined every subject area. We had to tie in with the Mississippi framework, the different competencies and objectives and how they can be reached throughout our project. We had to make sure that our health, science, social studies, language arts, reading, mathematics—every component—was a part of our project.
>
> Once we began school in August 2001, which was a month later, we came down to earth and realized that it was entirely too big, and we began to narrow it down

> because our expectations were too broad. Kay, Wendy, and Suzanne came to do a workshop with the entire faculty to bring them up to date with our plans and our goal. We shared with them [the faculty] the objectives that they should meet to help us carry out the project. We reached out to other teachers so that they could use the materials in their subject area. All of the subject areas were present.

The projects that the Chamber Middle School teachers designed included photography, dance, oral histories, and research on Delta blues musicians. Sutton found the classroom demonstrations extremely helpful.

> They brought resources into our classes so that we could have something to fall back on after they left. So they came in and actually taught their lesson for the day and warned us ahead of time so we could put it in our lesson plan, and we wouldn't just be off track. And once they left, we knew how to carry the lesson on.

All of the teachers agree that having the classroom demonstrations was important to helping them grasp the concept of and to feel confident about place-based teaching and learning.

Kay Sullivan, Wendy McCurtis, and Suzanne Thompson, as the teacher consultants, realized they had to help teachers both to create place-based curricula and to align their teaching with the Mississippi Department of Education benchmarks. They decided to have the teachers create a matrix that reflected the benchmarks and subject areas. Sullivan, in hindsight, says that was too ambitious for their beginning work with these teachers.

> I think one of the things that threw them off doing the work itself was the idea of a matrix. It was too broad of an idea for them to see how each subject matter could cross all of the criteria. That was just too much for them to see. What we needed to do was break it down and do one thing at a time. At first they would say that they understood what was going on and they really didn't. And we would leave them and they were supposed to have done a certain amount of work by the time we got back and they hadn't and they had not discussed it or called anybody.

So the consultant team, at least in the beginning, tabled the matrix idea, but continued to encourage the teachers to incorporate the state curricular benchmarks as they planned and implemented activities.

The consultants were confronted by what they term the "Delta mentality," a form of internalized oppression wherein the teachers felt that they were never good enough or had enough resources to get the job done, and that they were doomed to fail. Wendy McCurtis says it was difficult to get the teachers to open up and think broadly.

> We kept saying think big; think big. If you have all the resources in the world, what kind of thing would you do? And the first responses we got were very limited. Part of that, I think, is a lot of the teachers were born in the Delta and went to college in the Delta and stayed in the Delta. Even the colleges they went to—Delta State, Mississippi Valley, Auburn—were not outside of Mississippi. Another thing . . . a lot of people did come from sharecroppers and not ever being able to get ahead, working someone else's land and not quite being able to get ahead. And years and years and years of that may stop you from striving to get ahead.

Kay Sullivan adds:

> The other thing, they developed a fear of success because we found that a lot of

> them when they reached a certain level and they were about to be successful in getting something done and by the next time we came back to meet with them, everything had fallen apart.

The consultant team felt that if the school administrations had been more supportive, the project activities would have been stronger. Again communication, or the lack of it, was a major factor. Kay Sullivan shared this story and ideas about what could have happened differently in one situation.

> There have been times when we were there and they knew in advance that we were going to have a meeting with these particular teachers. The teachers were pulled out to go to another meeting which was taking place in the school instead of this one, which had been in the planning for months. I think they should have sat down together and had a meeting and really gone over what's expected of what ever is in the proposal, and the superintendents and principals should have defined what their commitments were going to be to this project. Because it is no good if their commitments were going to be "this is fine, this is fine," until they get the money to do something and they don't have the time to put into it. And it doesn't help the teachers and the teachers don't want to do anything, and they get fussed at for taking time to do something of which there was supposed to have been agreement. There needs to be some sort of way to get the principals and superintendents to say something or write something, a commitment that can be looked at in the files and say this is what you says you were going to do.

Angela Johnson, Chamber Middle School's principal, came to her position after the project's start. She was conscious of the time factor and of her role in supporting her teachers' involvement:

> I tried to give them the time and one of the things we would do constantly was to try and handle any concerns they may have had. If the Writing Thinking Institute had any questions, then we would try and arrange a time when they could come together. The big contribution was *time.*

Johnson's commitment to the project was evidenced by her school's leadership role in the overall project. However, Ms. Sutton, on the Chambers place-based leadership team and working on several other projects, listed time as the number one tension in getting the work done. Chambers Middle School was involved in several other grant-related projects during the place-based learning project. For the teachers, everything began to feel like an add-on. Principal Angela Johnson feels that there were so few teachers in the school who were willing and able to serve as leaders and they were worn thin:

> There are a lot of different grant aspects that were on the shoulders of about 12 teachers, and once you look at who actually is on the leadership teams, you are talking about the same people. At some point we hit some frustration levels, quite honestly, because in addition to work, faculty have families, and school, and other obligations. We requested a meeting with all of our funders—The MidSouth Foundation, Ventures, Mississippi Writing and Thinking Institute—to determine if we could streamline and to look at how these different projects can, might fit together.

The consultant team continued to work with the teacher leadership teams and teachers in all of the districts. By the middle of the 2001-02 school year, projects were operating in all of the school districts except Western Line. Place-based learning was beginning to take root in the Delta schools.

At McEvans Middle School, in the Shaw district, the teachers, when asked about their initial understanding of place-based learning, say they were very resistant to the project. "It's fear of the unknown," responded one teacher.

"I teach math and I couldn't see how it [place-based learning] fit," says another teacher.

However, the teachers stuck with the process and ended up with wonderful examples of how place-based learning helped students to develop and apply numerous skills.

At the end of the school year, each participating district held some sort of community event to showcase the project and its products and outcomes. The cultural fairs in Hollandale and Shaw galvanized the energies of the students, teachers and community members. All involved say that the fairs were spectacular events. Food, radio tapes, Power Point presentations, recipe books, folktales, Delta products, oral histories, student writings, art work, painted bird houses, presentations by community people—all evidence of new learning and the incredible amount of work that took place in a short amount of time.

Impact on Vulnerable Youth

In the Mississippi Delta, every child is at-risk and vulnerable. Two areas in which to look for the impact of place-based learning on the students are test scores and overall attitudes about using *place* for teaching and learning. The state of Mississippi assesses writing mastery of students in the fourth and seventh grades. Writing assessment scores at Chambers and McEvans showed tremendous gains over a two-year period (see Table 1). Angela Johnson, Chamber Middle School principal, saw the impact of the place-based learning on other subject areas as well:

> I came aboard last year as the principal. The test scores have gone up. We have a shift in writing. In the state of Mississippi they go from zero to four. First year there were a number of zeros and a number of ones, number of twos, no fours. The first year of the project, we had two fours, which is excellent from the state scale. Still, we had zeros and ones, but this school term, we have no zeros and the number of ones have decreased significantly and the number of twos. So the shift went to twos, threes, and fours. And that is in the area of writing and I think that kind of spilt over into our reading as well because those tests went up as well.

The place-based learning project engaged children in processes that helped them to feel hopeful, to see the beauty of their culture regardless of the contradictions, and to explore and understand the region's historical and social diversity. Consultant Wendy McCurtis tells a story about the improved self-esteem of a group of Leland's boys:

> My most positive experience was working with my little Leland boys and noticing the changes in them from being involved with place-based learning. They called themselves the 6-8-6 boys. (The number 6-8-6 represents their telephone exchange.) They were fifth and sixth graders. It's a bunch of them and we had worked with their individual classes. A couple of them came up to me afterwards and said, "Say, we can rap." I said, "All right, show me. You know, we are doing place-based and if you can write me a rap about where you are from, then I'll look at it; let me see it." And it had to be written down, because you know they want to . . . well they had to write it down.
>
> So they came up with this idea; each one wrote their own little thing. Of course we worked with them a long time on having

Table 1. Writing Assessment Scores

	Year	Grade	0	1	2	3	4
McEvans							
Shaw	99–00	4th	0%	21%	61%	17%	1%
		7th	6%	19%	69%	7%	0%
	00–01	4th	2%	9%	59%	25%	5%
		7th	2%	6%	51%	36%	4%
	01–02	4th	0%	10%	44%	32%	14%
		7th	2%	2%	49%	41%	7%
Chambers							
Hollandale	99–00	4th	NA	NA	NA	NA	NA
		7th	17%	18%	55%	10%	0%
	00–01	4th	NA	NA	NA	NA	NA
		7th	1%	10%	54%	32%	3%
	01–02	4th	NA	NA	NA	NA	NA
		7th	0%	7%	71%	19%	19%

Note: The Mississippi Writing Assessment is scored on a scale from 0 to 4. In the Shaw school district, for school year 1999–2000, only 17% of the students scored 3 and only 1% scored 4. The first full year of place-based learning was school year 2001–02 and in that school year, 32% of the students scored 3 and 14% scored 4. The number of students scoring 1 for school year 1999–2000 decreased from 21% to 2%.

Source: Mississippi Statewide Testing Program online at www.mde.k-12.ms.us/acad/.

their own little verses and then the choruses and the way it should be formatted. And then some of them did the drumming by rapping their knuckles on the tables. And they kept on trying to get it polished enough, and of course it never got to where we wanted it. We didn't have time to get in there and really get it polished.

One day they were whistling the Andy Griffith theme, and then they were taking that into a drumbeat. And Kay [Sullivan] is talking to them and I'm talking to them and they are working on it and decide they are going to put that theme in front of their song and the name of their thing is, "*This ain't Mayberry.*" Well, because that is where people think that they are from. And then they found out that they were going to be on that CD, they lost their minds. And as sad as it is to say, we used that [participating on the CD], and would say to them, 'Don't let me hear about you messing up, because you are not going to be on that CD.' And anyway, the day came for the CD, and I had worked with my little boys and had worked with a couple of other kids that were on the CD from Leland. [The morning of the CD recording] I left the house late and got there, right before they had two practice sessions left. Walked through the door and they were all dressed in red t-shirts and jeans. They were so proud. I was teasing

BEST COPY AVAILABLE

> them, "Boys you know this is radio, not video." But they were just so proud to be on the air and actually their picture made it to the CD jacket. It really changes them, and I know that is a by-product of place-based learning. We wanted them to learn stuff and they learned some stuff, too.

Everybody associated with the place-based learning project—superintendents, teachers, parents, community people, public officials, and of course the students—learned something new or gained a new perspective or insight on some aspect of Delta culture, the diverse population, the history, and the economy.

What Change Really Happened?

Rosabeth Kanter (1983) presents a model of organizational change that features five major events in change histories. She calls it the change funnel because the first two events, the grass-roots innovation and crisis or galvanizing event operate simultaneously and funnel down to shape the change strategists and strategic decisions, the individual implementers and change champion, and finally the action vehicle for change recipients (See Figure 1). For purposes of this study, the concept of organization is applied to the broader educational system in the Delta Five Cluster region.

Grass-roots Innovation

In organizations, grass-roots innovations occur when activities deviate from organizational expectations and norms and demonstrate the organization's capacity to take productive action. In the Delta school systems, forming the Delta Five Cluster was a grass-roots innovation. Charles Barron called it, "batting a thousand, when you can get five superintendents to sit down and discuss anything or agree on anything." The five superintendents, all leading low-resource and low-performing school districts, created a formal structure through which to view and address their common problems. Moving out of one's individual isolation to join with others who shared concerns and issues and to build on those commonalities was an innovation. The umbrella organization gave the five school districts a platform on which they could stand and seek funding to address their common problems. If not for the crisis related to student low-performance and low achievement, the forming of the Delta Five Cluster might not have been as significant an innovation.

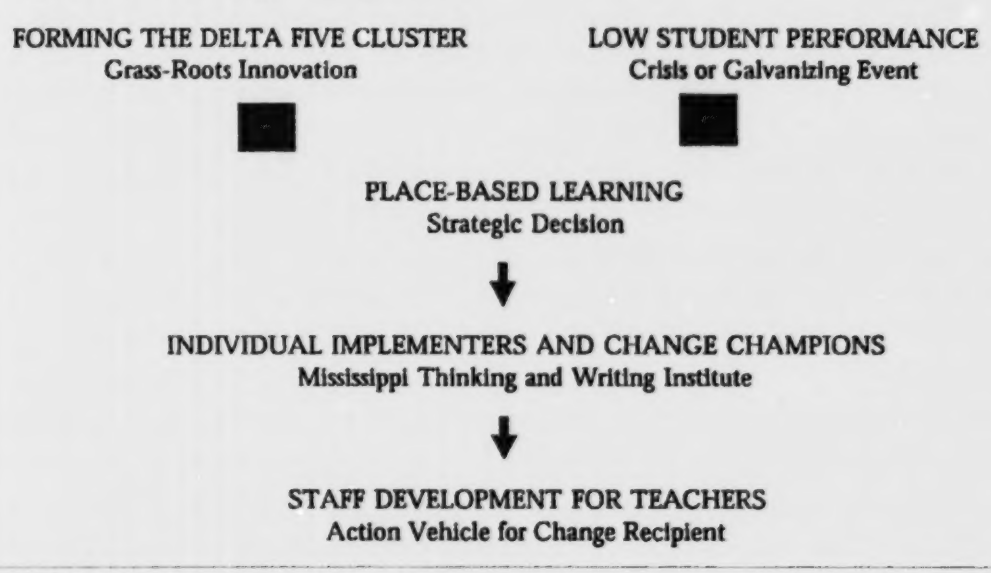
Crisis or Galvanizing Event

A crisis can be external or internal. The crisis, in this situation low student performance and achievement, caused the organization to pay attention to the need for change. In the case of the Delta Schools, the crisis was both external and internal. Externally, The Delta schools were "under the gun" by the Mississippi Department of Education to raise their low test scores. Internally, the schools faced a number of problems spawned by low-wealth conditions, staff turnover, and years of general hopelessness. Neither the innovation of the Delta Five Cluster nor the crisis of low student performance and achievement could lead to change without a strategic plan and people to implement it.

Change Strategists and Strategic Decision

This is where the "rubber hits the road." In other words, "How can the Delta Five Cluster innovation set in motion changes to address the problems inherent in low student performance and achievement?" The Delta Five Cluster, as a collaborative, had more presence and status and was more attractive to funding agencies than any of the districts acting alone. The Cluster, however, did not plan for and create internal structures that would accommodate, coordinate, and integrate a variety of funding streams. When Charles Barron, representing the Cluster, explored possible funding sources, he discovered not only a foundation interested in addressing the crisis but also a foundation with an approach for doing so—place-based learning. The values and philosophy of the

Figure 1. The Mississippi Change Funnel



Annenburg Rural Challenge matched well the needs and conditions of the Delta schools. In addition, the Walton Family Foundation, which shared many of Annenburg's interests, wanted to support the Delta Cluster. So the change strategy, through a process of funding opportunities and negotiations, became place-based learning.

The challenge for the Cluster was designing a strategic planning process that was not only top-down but also bottom-up. This mattered in both proposal development and project implementation. The Cluster, a relatively new collaboration, lacked the flexibility and organizational culture required to guide a more inclusive planning and decision-making process. Moreover, hierarchy and inflexibility due to the extreme demands placed on the rural superintendents and principals stymied the organizational culture. The process was also encumbered with perceptions of roles and responsibilities. A more strategic planning process might have included more integration with existing activities, attention to communications, and team mechanisms to respond to and stimulate new ideas.

Implementing place-based learning presented a cultural challenge for the schools. As a change and a learning strategy, it required all parties to rethink the basic purposes of education. There was very little time allotted to reflect, across the systems (with teachers, students and parents), on what shifts in attitudes and processes would be necessary to support and encourage place-based learning.

Place-based learning situates students and their communities—as opposed to competencies and commercially produced curricula—in the center of the learning process. It gives teachers and students new meanings about their culture, their communities, their histories and their futures. It requires more collateral than hierarchical interactions and authority. It "pushes the envelope" on issues of power, knowledge, authority and control.

BEST COPY AVAILABLE

Individual Implementers and Change Champions

Who has the power to push the change strategy? How does the drive for change become internalized? What role does communication play? These questions are critical to any change event. In the case of the Delta project, the superintendents had virtually all of the power to push the change strategy. However, wrestling with the day-to-day demands of running low-resource, rural school districts, they felt in many instances, that the project was an add-on to all the other work that needed championing. It is not clear to what extent the superintendents understood the full ramifications of implementing place-based learning. The drive for change had not been internalized.

Charles Barron, as the Cluster's leader, had considerable influence, but early in the process ran into resistance and hostility from the Cluster's director. That struggle might have dampened his efforts to champion the project effectively. He had a vision for how the project might connect to other efforts but was strapped with the daily tasks of running a district and had little time to plan and institute the structural changes needed to support teacher involvement.

The consultant team from the Mississippi Thinking and Writing Institute championed the project most effectively. They had a firm footing in teaching, learning and research processes. Even though it was the first time they integrated a writing process structure with a place-based learning structure, they made it clear to the superintendents, the principals, the teachers, and the students that they *believed* in place-based learning. They communicated to stakeholders over and over again that place-based learning had a role in getting the school districts what they wanted in terms of improved student performance and achievement. They believed that.

The resistance that the consultant team experienced was based primarily on the lack of the superintendents' clear communication to teachers and principals. The resistance was reinforced by not having time with teachers to discuss, reflect on and experience teaching and learning in new ways. There were scheduling problems, teachers not having materials and supplies to implement special projects, and hang-ups with stipends to support teachers in staff development activities. The consultant team stood firm, through all of the confusion, to reach a stage of action.

Action Vehicles for Change Recipients

The last event in the change funnel is getting down to action. As a strategy to improve low student performance and achievement, place-based learning in the Mississippi Delta Five Cluster's school districts was actualized. The project was the vehicle and the change recipients were primarily teachers and students but also the community. The students also demonstrated new levels of writing proficiency. The staff development activities, the classroom demonstrations, the students' community explorations and inquiries, the radio programs, the Power Point presentations, the cultural fairs, the publications and the many other products and activities resulted from teachers being able to implement place-based learning in their classes. Most importantly, the teachers began to understand what the change meant for teaching and learning. Barbara Henry and Katie Peacock, teachers at McEvans say:

> At first, it [place-based learning] was like an add-on. I didn't understand. But when it got a little clearer to me, I found that I could use it to do my lesson, but now [it gave] my lesson more excitement. In math, if they write the process, then they can do it.
>
> We can continue to collaborate with each other. We can continue to have children

> do projects where they bring them back to the classroom, and do research through the courts, do book reports, creative writing and art work. In Ms. Henry's class, when she is teaching math problems, I notice, according to the state testing those same problems that she is teaching and they ask the child to tell how they got the answer. So they have to write the process for answering that problem. And they know the writing process from our place-based projects.

The project goals to involve students in place-base learning and to activate school community partnerships were met. Overall, awareness of the area's local history increased and teachers were able to create opportunities for place-based learning that were aligned with Mississippi's curriculum standards. At the organizational level, there are still many kinks to work out in terms of institutionalizing and sustaining the change. It will be important for all the players to reflect on this process individually and collectively, to determine what new strategies and decisions might sustain, create, and support new ventures into place-based learning in rural Delta communities.

Recommendations

This project reviewer's recommendations are based on responses to the questions, "What could have happened differently to improve the project's outcomes and sustainability?" and "How could the project have benefitted more from its partnership with the university?" While it is fairly easy to look back on an experience with 20/20 clarity, it is difficult to predict with accuracy a set of conditions or structures that will guarantee future project success. However the following suggestions might be considered in revising project activities:

- Involve teachers at a much deeper level in conceptualizing and planning for project activities. This would require more time up front and before the proposal is submitted for informing and educating teachers about place-based education. Administrators and communities could benefit from hearing teachers' concerns about taking on new projects

- Create a memorandum of agreement that is generated out of an intensive planning process that includes all major stakeholders

- Encourage school organizations or local districts to assign an administrator to oversee and help integrate special projects into ongoing and other special projects

- Encourage school districts to reflect on previous experiences with implementing and sustaining change in their districts and to consider the ramifications of implementing an approach to teaching and learning that shifts power relationships and requires new organizational structures such as time for reflecting and planning and working outside of the school facility

- Plan for sustaining activities and relationships from the project's outset. Build a publishing component for teachers to share work and network with peers on local, state, and regional levels. Encourage teachers to document their lessons and the challenges and joys of creating place-based learning. Follow up with teachers annually to evaluate the evolution of place-based learning in their schools and communities

- Involve parents and community partners in place-based learning activities and discussions so that they can better understand and advocate for place-based learning with local school boards and other educational organizations

Reclaiming Indian Education Through Partnerships with Engaged Institutions

By Sandra J. Wilson

BEST COPY AVAILABLE

Introduction

The 2000 U.S. Census reports 298,197 individuals of Navajo ethnicity, making the Navajo the largest Indian tribe in America. Some 255,543 individuals identified as Navajo (85.7%) are actually enrolled members of the Navajo Nation.[1] Of the 180,000 (70.4%) who live on the reservation, 168,000 (93.3%) are officially enrolled.

According to Kelsey Begaye, former president of the Navajo Nation, 18,000 homes on the reservation are without electricity; many are without running water.

Many Navajo children face long journeys to and from school over primitive roads, spending up to three hours a day on school buses. It is not unusual for parents to put their children on a bus at 6:00 a.m. and not see them again until 5:00 or 6:00 p.m.

When, these parents ask, are their children to study? They worry about their children's eyesight as they do their homework by kerosene or propane lamps. Even those fortunate enough to have electricity worry that their children are not getting enough rest. Many children are forced to live in boarding schools, where their connections to family and community are steadily weakened.

The Navajo Nation spans 27,000 square miles in Arizona, Utah and New Mexico, and is larger than 10 of America's 50 states. Partnerships between higher learning institutions and the Nation's vulnerable youth are difficult to establish and maintain in this vast and diverse region. Consequently, the connections between them sometimes seem ephemeral—at best, a shadow of what one wishes to see. Other times, connections are vital and greatly encouraging.

Despite the geographical vastness and the amount of time it takes to travel from a university campus, there are several higher education-community partnerships on the reservation. This case study focuses primarily on the engagement of Northern Arizona University with schools in seven districts—Ganada, Kayenta, Rough Rock, Tuba City, Chinle, Rock Point and Little Singer—in efforts to reclaim Indian education and culture through work leading up to the creation of and evolving out of a program called "Learn in Beauty."

History of Force

To understand some of the problems facing educators on the Navajo and other reservations, one must look to the past.

The westernization of Navajo education was formalized with the Treaty of 1868 that gave birth to the Navajo reservation. Tribal leaders, convinced of the value of education for their children, negotiated with the federal government to include within the treaty a government responsibility to provide schools for Navajo children. Unfortunately, the ultimate goal of those early schools was to "remove the Indian from the child." Administrators and teachers, determined to "civilize" Indian children, removed them from their homes and communities and stripped them of cultural identifiers such as the traditional *tsiiéél* hairstyle and Navajo-style clothing. Children were forced into alien environments that held no meaning for them.

Early Indian schools were patterned after military academies. Carlisle Indian School in Pennsylvania was a prime example. Later, children were educated mostly for home service to Anglo families. Young girls were taught to sew, cook and clean; boys were taught carpentry and mechanics. The notion that a Navajo child could become a doctor, a lawyer or an educator was unthinkable.

Perhaps most damaging of all was the stipulation that Navajo children speak only English at the government run schools. A child caught speaking Navajo was severely punished. Such punishment damaged the mindset of many Navajo students toward education.

For more than a century, Navajo parents had no power or voice in their children's education. Consequently, they felt little or no ownership of their children's formal education. Nonetheless, most held the desire that their children receive that education in order to compete in a rapidly changing world.

Proponents of place-based learning recognize that community ownership is an essential component of a successful Navajo school. One challenge facing such endeavors is overcoming the negative effects of history and winning parent and community involvement. This takes time, but some schools are reporting powerful parent involvement as a result of place-based learning.

Navajo As an At-Risk Population

The copious literature surrounding Native Americans today reveals that, of all ethnic groups, Native Americans exhibit the highest dropout and unemployment rates, and more than their share of alcoholism and depression. Much of this is attributed to the loss of culture, feelings of subordination, of being a conquered people, a lack of adequate, culturally significant education—the list goes on.

Dr. Louise Lockard, associate professor of bilingual and multicultural education and Navajo language curriculum at Northern Arizona University, points out that Arizona has the highest high school dropout rate in the country, and that some reservation schools have rates up to 60%. Arizona's total high school dropout rate for 2000–2001 was 9.8%. The dropout rate for Caucasian high school students was 6.7%, compared to 15.1% for Native American students. Although still unacceptably high, these rates are an improvement over the year before when 8.1% of Caucasian students and 16.8% of Native American students dropped out.

Oftentimes teachers on the Navajo reservation are inexperienced and ineffective—not well versed in Navajo culture or language, and monolingual English speakers who tend to move on within the first year or two of their teaching assignment.

The Arizona Instrument of Measurement, or AIMS test, administered to grades 3, 5, 8, 10 and 12, is used to document teaching success in Arizona schools. A brief sampling of schools within the districts that participated in the Learn in Beauty Program covered in more detail later in this study reveals the following:

- Window Rock High School, with an enrollment of 809 students and a dropout rate of 9.1%, had only 37% of its 10th graders meet state standards in reading, with 1% exceeding these standards. In writing, 8% met, with none exceeding, state standards. Finally, only 8% met and 1% exceeded state math standards.

- Ganado High School, with an enrollment of 760 and a dropout rate of 10%, reports 30% meeting and 1% exceeding state standards in reading, 7% meeting standards in writing, and 9% meeting and 1% exceeding in mathematics.

- Monument Valley High School, in the Kayenta District (934 students; 9.3% dropout rate) reports 30% meeting and 2% exceeding standards in reading, 8% meeting standards in writing and 9% meeting with 3% exceeding Arizona State standards in mathematics.

Of course, AIMS is a standardized test, another point of concern in Native American education. Teachers of Navajo children consistently note that the assessment of Native American students using standardized tests is a problem.

The Navajo language is also at risk. Today, many parents either do not know the language or, for various reasons, have chosen not to pass it on to their children. The boarding schools mingled

tribes—Navajos have married non-Navajos—resulting in the need to speak English in the home. Many Navajo parents also believed it necessary to withhold the Navajo language from their children so that they could become more successful in school and in the dominant culture.

"All of our schools have been identified as failing because our students don't do well enough on a test. We agree that one of the most difficult issues we're dealing with now is standardized testing."

–Louise Lockard

Several important traditions have already been lost to the Navajo people. Finding a "singer" or *hataalii* (medicine man) to perform certain traditional ceremonies is increasingly difficult. *Hataalii* can no longer find apprentices who are fluent in Navajo or who desire to learn the old ceremonies.

But the easiest way to observe the decline of Navajo culture is simply to travel to social hubs across the reservation—fairgrounds, chapter houses, stores, restaurants, laundromats and homes. It is increasingly rare to hear a conversation between a young child and an elder held in Navajo. Adults may criticize another individual's inability to speak Navajo, while their own children may know only the names of familiar animals and relatives in the language.

Interestingly, most Navajo Nation governmental and chapter business is conducted in Navajo (the exception being when non-Navajos or monolingual English speakers are included in the conversation). Still, what will or will not be shared in English is often discussed beforehand in Navajo. This nearly guarantees that most young people will not be involved in the business at hand.

Mark Sorensen, an educator and administrator strongly committed to place-based learning, has seen other risk factors among Navajo students. He notes, "We have a lot of kids who are unsure from day to day where exactly home is, and that's sometimes because parents don't have a home and are going from hotel room to hotel room." The lack of employment opportunities on the reservation[2] means families must be quite mobile, moving from place to place competing for jobs.

With respect to many of these problems, the Navajo Nation is not unique among rural areas in the country, but the problems do exist on the reservation, and they affect the way students perform in school.

Gathering the Pieces

The Navajo Nation is fortunate to have a relationship with several higher learning institutions. The main campus of Diné College is located at Tsaile, Arizona, offering satellite campuses in outlying communities such as Window Rock, Tuba City, Crownpoint and Ganado. It is distinguished in that it is the college of the Navajo Nation and as such, holds the survival of Navajo language and culture closest to heart.

The mission of Diné College is an ideal match to the concerns of the Navajo Nation. It is to apply the *Sa'ah Naaghái Bik'eh Hózhóón*, traditional Navajo education principles to advance quality student learning:

- Through *Nitsáhákees* (Thinking), *Nahatá* (Planning), *Iiná* (Living), and *Sihasin* (Assurance)
- In study of the *Diné* language, history and culture
- In preparation for further studies and employment in a multicultural and technological world

- In fostering social responsibility,community service and scholarly research that contribute to the social, economic and cultural well-being of the Navajo Nation.[3]

The University-School-Community Partnership efforts to examine meaningful partnerships between Diné College and reservation K-12 schools and communities revealed an institution, not unlike many others, that was seriously under-funded and under-staffed. Consequently, Daniel McLaughlin, program specialist of the Diné Teacher Education Program (DTEP), points out that the college's main connection in cultural and place-based partnerships is the seeding of student teachers and graduates into reservation schools. Through a collaborated effort between Diné College and Arizona State University, graduates of this program can earn a bachelor's degree in elementary education or a master's degree in curriculum and instruction.

Schools that are open to place-based, culturally enriched curricula are the ideal homes for Diné College graduates. Steven Keiser, dean of student services at Chinle Elementary School, is very happy with the student teachers and teachers from Diné College, and sees them successfully raising standards such as retention and attendance among his students.

Program graduates have the tools to create rich and exciting curricula with place-based learning as a model. But McLaughlin suggests, teachers are only as successful in this work as they are allowed to be, with powerful factors that determine whether or not they can engage students in culturally relevant place-based learning. These factors include resistance from existing school administrators, and even the politics within the community of each school.

June Tackett and community members point to such a problem in Pine Springs. Traditional community members complain that they have no say in the curriculum being taught in the local Bureau of Indian Affairs day school, that Christianized Navajos have taken over the school. In response, they have filed a lawsuit, spurring a civil rights probe by the Department of Education and the Bureau of Indian Affairs. At the core of the legal battle is Executive Order 13160, which prohibits discrimination on the basis of race, color, religion or sex in federally conducted training and education. Executive Order 13166 also requires that Limited English Proficient students not be deprived of full educational benefits, interpreted by the plaintiffs as a basis for the schools' inclusion of Navajo language and culture in its curriculum. Of special interest to local artist Irving Toddy and others is the "No Trespassing" sign posted in front of the day school itself. "When you start isolating the facility from the community, you're going to have problems," Toddy says.

Dr. Louise Lockard coordinated the Northern Arizona University partnership with the seven districts that make up Learn in Beauty network, respecting the need for each to develop meaningful work within and responsive to their own community. For example, Chinle focused on astronomy, science and Native math out of Canyon de Chelly. Rock Point School developed a model curriculum from an oral history project in which students interviewed community members about the names of nearby places, complete with photographs and video clips designed to teach the Navajo language.

Each school district signed a memorandum of agreement and provided a teacher, forming a board to identify students for placement in the program and to evaluate student work.

An important part of this work was to bring schools together to share expertise and existing knowledge to implement place-based education within the curriculum, and to demonstrate the value of collaboration across school districts to share exemplary practice, according to Lockard.

This NAU–K-12 school district partnership resulted in the development of culturally relevant curricula and lesson plans meeting Arizona State

standards. The way in which the standards were integrated into the curriculum is one good characteristic of the connection of place-based learning to mainstream institutions, Lockard notes.

Rough Rock Demonstration School

The original model of a school dedicated to place-based learning and community ownership on the Navajo Reservation is the Rough Rock Demonstration School, which opened in July 1996.

Allen D. Yazzie, chairman of the Navajo Tribal Educational Committee, and other tribal leaders recognized that the education provided to Navajo children lacked important ingredients that would guarantee their success. Funding became available through the Office of Economic Opportunity (OEO) for rural educational demonstration projects, and in 1964, interested individuals applied for and received funding.

In its first year, the demonstration project was housed at the Bureau of Indian Affairs (BIA) School in Lukachukai. Conflict with an existing staff and administration—governed by civil service regulations—threatened the success of the new school. The local school board faced the uncomfortable position of holding little power at Lukachukai, including the inability to hire or fire employees.

Still, the project was considered meritorious, not only by the Navajo leaders who believed in a new style of education for their children, but also by the BIA and OEO. A nonprofit corporation, the Demonstration in Navajo Education (DINE)[4] was formed to seek funding for a new school. OEO provided additional funding, and the BIA handed over a brand new $3 million facility in Rough Rock, Arizona.

DINE believed that community ownership of a school was vital to its success, and initiated a series of meetings within the Rough Rock community. These meetings established that the community indeed wanted the school, and led to the formation of a school board consisting of community members responsible for control and leadership of the school.

Elements new to the demonstration school included an interrelationship among students, school, parents and community, as well as a return to the value of cultural identification. A strong emphasis was placed on the Navajo language, with English being taught as a second language.

Proponents of the Rough Rock School recognized that high turnover of teaching staff was a problem in reservation schools, and realized that having a dependable, Navajo-fluent staff necessitated reaching out into the community as an employment pool. This outreach effort allowed teacher assistants who would otherwise be unable to find employment in a school due to a lack of formal education to be hired at Rough Rock.

To meet Arizona state teaching standards, the school instituted an adult education program that provided local teachers, staff members and community members the opportunity to work toward a college degree, or simply to hone traditional and cultural knowledge and skills with which to make a living. These skills included silversmithing, wool preparation and rug weaving, sewing and carpentry and contributed greatly to the ability of families to survive in this isolated rural community. The school also contrived to provide community services such as laundry and showers, and even operated a toy and furniture business.

Other schools were to follow the Rough Rock model, incorporating Navajo language and culture into their curriculum, in turn engaging increasingly at-risk Navajo youth in a meaningful education.

A Curriculum of Value

Almost 40 years after the founding of Rough Rock School, educators and administrators still agree that the continued survival of the Navajo language is of utmost importance for Navajo students, and that place-based learning is important to that survival. The work of schools like Rough Rock and others that followed demonstrates how place-based learning serves at-risk youth.[5]

"The model we've seen in many of our institutions is that we are going to teach a standardized curriculum to a homogenized population, and when we try that with Native American students, they often become invisible and disengaged—so we need to get kids involved with actively transforming their communities. This will serve two purposes. One, it will make the kids successful learners, and two, it will help solve the real issues we find every day in our community," Dr. Lockard says.

In a recent class, one of Dr. Lockard's students related an incident where a family traveled from Phoenix to Chinle to attend a *kinaaldá*.[6] When it was time for the family to return to Phoenix, the two youngest children started to cry and told their relatives that they did not want to go back.

"They said they wanted to stay on the reservation where they were treated with respect. They said they encountered racism every day in the schools in Phoenix, and they felt that their place was on the reservation. We've made too many of our schools just like the schools in Phoenix – schools that don't value Navajo culture and language," Lockard says.

She advised that more has to be done to engage these students, many of whom come from homes where their words are valued, and where they share the work of the family.

Dr. Mark Sorensen, director of Little Singer Community School, agrees that an important component of place-based learning is a partnership among the family, school and community:

> Place-based learning provides our Native American children with a context that makes sense to them, a context of why this stuff they're doing in school is even worth doing. I've seen too many kids go through school out here on the rez and literally feel it had absolutely nothing to do with their lives.
>
> What I think is wrong about the way we were taught [as it relates to Native American students] is that there are winners and there are losers in that system, and those of us who are winners think we are winners because we did what we were supposed to do. This doesn't take into account that our family values were similar to those of the schools, ... but kids coming from schools on the rez often have very different values in the home than those found in the school.

Sorensen has seen firsthand the life of Navajo students residing in boarding school dormitories. He observed that at the school, "Children would get up and have to scrub the bathroom—their appetites destroyed by the cloying and invasive smell of disinfectant. At home, students would awaken to run in the fresh air towards the east and return with an appetite for breakfast."

Mainstream education also sends a false message to students about the value of the traditional lives of their elders, Sorensen says. Navajo students may attend elementary school relatively close to home, then move farther away for high school, farther still for college. "The message students were getting was that the whole purpose in life is moving away from home. The farther from home, the more successful one was. Place-based learning teaches students that no matter what is happening out in the world, you can find a small microcosm of it here at home," Sorensen notes.

Sorensen continues:

> The important thing of learning within your own community is that you can do something about it within your own educational experience. It's productive. If you start looking in your own community at the problems that are there with the i dea that you are going to do something about them, then you are connecting students, family and community, and the community will support you.

Last year, the Navajo Reservation was devastated by drought conditions, inspiring one high school teacher from Chinle to explore the care of livestock in drought situations. Students became empowered and engaged by assisting in the identification of problems and becoming involved in research to develop solutions within the community.

Teachers Tom Tomas and Justin Willie recalled one student in particular who, after leaving Little Singer's eighth grade, went on to Winslow High School where she was quickly recognized for her knowledge of cultural plant identification, cultivation and use—to the extent that her teachers had her share her knowledge with other students. She has become an ambassador, so to speak, of successful place-based, service learning.

The Learn in Beauty Program

The Learn in Beauty Program, a partnership between Northern Arizona University (NAU) and K-12 schools on the Navajo Reservation, is an inspiring example of a higher education institution's engagement with a community to develop a curriculum of value and thereby to address the needs of vulnerable youth in culturally responsive ways.

Seven school districts formed the Learn in Beauty network, also known as the Annenberg Project. They were Ganado, Rock Point, Chinle, Kayenta, Rough Rock, Tuba City and Little Singer.[7] Dr. Louise Lockard headed the project at NAU, and indicated that these schools were chosen for their success rates and existing place-based curriculum. She became involved in the project in 1997 with her sister, Jane Lockard, who was a teacher at the Chinle Primary School and a member of their advisory board.

According to Louise Lockard, "we wanted to write the project for the Chinle Primary School, and the Annenberg portion of that project was to do a place-based education component where parents worked with primary school children and teachers in Canyon de Chelly (an ancient Indian village in the town of Chinle that is now a National Monument). "This was a way of integrating science and math in a culturally relevant component in the dual language project."

Lockard expanded her work into the other six districts in 1998, in a teacher education component where she and her colleagues worked with the Annenberg Advisory Board to identify bilingual teachers and place them with mentor teachers in the school to deliver coursework in bilingual education.

Each district developed projects unique to their own community needs. In Chinle, the program brought teachers into the canyon—teachers who had never thought of the canyon as a classroom where children could learn. As a result, teachers were drawing upon their cultural experiences and became very involved with learning outside the classroom themselves.

A Canyon As a Classroom

Dr. Paulina Watchman was an important part of the work in Chinle. Her philosophy of education is "grow where you are planted," and Watchman taught students *and* parents pride in their home, Chinle.

Watchman strongly objects to the negative image projected onto the reservation by textbooks and media that suggest that the reservation is not a good place to live. She strongly believes that the reservation—that Chinle—is a wonderful place to raise children. But in order to get students to understand that, educators and families must work to revitalize Navajo pride, she asserts.

She remembers this pride in the Navajo elders of her earlier days. She shares the memory of her grandfather in his *tsiiyéél* (the distinctive hairknot worn by Navajo men and women) and tall hat, the grandmothers in their velveteen finery punctuated by heavy turquoise and silver jewelry, with a gentle smile. "Their dignity came from their traditional knowledge," Watchman says.

Watchman reflected on the damage done to Navajo students through what she calls "trauma through education"—the past preaching to students to forgo their traditional ways, which are portrayed as below those of mainstream culture. At-risk students engaged in effective place-based learning are fortified with the emphasis that it is okay to be Navajo.

Still, Watchman is pragmatic about the westernization of Navajo education. "I can't blame my parents—they did the best they could at that time. Now the federal government encourages diversity. We're allowed to look at what the Navajo people had as an educational system before the 1800s."

For at least a part of that system, Chinle students are looking at Canyon de Chelly.

The Navajo, Watchman says, were not the first people to inhabit the canyon, and all have left their mark. The canyon is full of people versed in Navajo agriculture, earth knowledge, arts surrounding the sheep herding and agricultural lifestyle of the Navajo. Children go into the canyon to help butcher sheep, to learn how to gather herbs to dye wool, or to sit side-by-side with master potters to help create dung-fired pottery. Within the canyon there are petroglyphs, illustrating Navajo astronomy.

The Navajo educational paradigm, *Sa'ah Naaghái Bik'eh Hózhóón*, contains instruction in nature, philosophy, science, math, and astronomy—all the components necessary to meet state academic standards. And all of this, Watchman insists, can be found in Canyon de Chelly.

Little Singer Community School

Little Singer Community School is another prime example of a school designed by a community for a community. The school was formed from the belief of *Hataalii* Little Singer that children are the life-blood of a community. Little Singer objected to the removal of children for the purposes of education, and donated land and the original hogan for a school where children could remain in their homes rather than face long bus rides or boarding schools.

The community took the medicine man's vision to heart, and constructed the small school that bears the old man's name. Dr. Mark Sorensen, whose commitment to place-based learning goes back to his days at Rough Rock and Leupp Schools, Inc. (LSI), directs the school.

While at LSI, Sorensen was inspired by a visit of an Israeli agricultural engineer who demonstrated the use of drip-irrigation to local farmers who had always used the traditional dry farming techniques of their ancestors. As a result of this connection, farmers saw harvests five times larger than the year before. Sorensen says there were so many surpluses that families were taking truckloads of vegetables into border towns and selling them at a loss.

"I had a full boarding school program, almost 400 students, and we had to feed those students every day. So I offered to buy the crops to feed the children."

In addition to vegetables like corn and squash, there were also crops such as onions and chilies. Ever resourceful, Sorensen set up a contest with the staff and students for a salsa recipe. The winning recipe was mass-produced by students and staff and sold at premium prices under the label *'Azee'adilchii*, or "hot medicine."

Upon his arrival at Little Singer, Sorensen stepped into a landscape devoid of plant life, and remembering his work at LSI, dreamed of allowing the desert to bloom again. He worked with teachers and students in the reintroduction of native plants first at the school, then out into the community.

Sorensen also became involved in grant writing for a project called Community Challenge, working with the Navajo Nation and the Rural School and Community Trust, all the while continuing to nurture native plants and herbs at Little Singer.

Louise Lockard contacted Sorensen and a partnership between Northern Arizona University and Little Singer was formed called Science and Math in Learning Environments (SMILE). Little Singer enrolled several teachers in the program, which had a Native American-style approach. Sorensen felt that the SMILE program fit in with the goals of Little Singer, so he became involved in writing mini-grants that led to the construction of the school's first greenhouse.

The greenhouse became a central part of Little Singer's efforts to nurture and transplant herbs and plants across the campus and into the community. Through this partnership, teachers were able to see how place-based learning could involve at-risk students while meeting academic standards.

"If you start brainstorming on what are the problems and what are the solutions, after awhile you realize you can cover just about everything, because the local situation is just a microcosm of the larger situation. Instead of starting with the standards and beating your community over the head, start with the problems and solutions, and out of that discussion can come offshoots of how you can meet the standards," Sorensen says.

Because of its small size (Little Singer's 2001 Junior High enrollment was only 29 students), the whole student body could become involved in these projects, whereas in larger school districts, teachers had been forced to limit participation to those students who would best serve the partnership between lower schools and higher education institutions.

Finally, the Learn in Beauty program was instituted at Little Singer, offering degree programs in bilingual education.

"The nice thing about the Learn in Beauty Program, though it didn't focus on science, was that it focused on survival and maintenance of the language, which hooked into our ideas of reintroducing native plants and regaining the strength of the land and community," Sorensen says.

Engaging At-Risk Students

The partnership between Northern Arizona University (NAU), its Learn in Beauty program and at risk K-12 students on the reservation has been highly effective. One of the most important results of these efforts is the weaving of a web of interconnection among schools, families and communities.

"In a child's life, if those three entities are making sense to one another, then I believe a child is going to feel more secure, and if a child feels more secure, he or she is going to be willing to take more risks and learn and apply things," Sorensen says.

Through the formulation of rich, genuine project-based work, students are engaged in real problems in their own community, formalized by Northern Arizona University and selected in part by

teachers from that institution. This leads them to study problems directly affecting themselves and their families, and helps them to formulate solutions that make sense. From this process, students are empowered, and come to identify problems on their own.

According to Lockard, it is easy for Navajo students to identify meaningful community issues. One of the projects in Chinle, for example, looked at the problem of a serious housing shortage on the reservation. They investigated the process of obtaining home site leases whereby reservation residents obtain a one-acre home site upon which to build a home. The process can be long and frustrating, as it requires the signatures of all neighbors agreeing to allow the home site.

"Emmet [Bia, Navajo Government teacher] actually found that his high school students knew more than their parents about obtaining a home site lease and moving out of that HUD housing project. The parents were often overwhelmed and frustrated by the complexity of that issue," Lockard says.

Delving into the history of a community also helps students identify solutions to problems. One of Lockard's students presented a story about the Flood of 1928 in Leupp, which Lockard especially appreciated because of the flood in the same area only weeks earlier. From lessons such as this, K-12 at-risk students learn that unless problems are solved, they will continue.

"In Leupp, it's a matter of looking at invasive plants and looking at how the river has been dammed, how water needs to be supplied for irrigation in the community," Lockard says. "Once our teachers, or students in our NAU program, identify an issue, the students become involved and try to come up with solutions within their community.

Much of NAU's involvement with the Learn in Beauty network was born of a desire to provide students with a meaningful bilingual education that presents *Diné Bizaad* (the Navajo language) as a language of value and status. Lockard says that when the Navajo language is used as a language of prestige in the classroom, the children are proud and that pride leads to academic success.

Place-based learning provides at-risk students with a sense of their roots and pride in where they come from, Paulina Watchman says. In her opinion, if place-based learning were implemented early on in Navajo schools, it would eliminate children entering higher learning institutions without the stability of their roots.

Dottie Hobson, principal of Chinle Primary School, believes that place-based learning begins in the home and spirals outward into the school and community. She too stresses that children need to be rooted within their own culture before they leave the home for college or work.

In the seven school districts, place-based learning has developed from a cut-and-paste gathering of parents, community members, elders, and dreams into impressive place-based learning curricula. Most importantly, students have responded favorably.

Measurable Results

Lockard reports that there have been wonderful bilingual programs since the first Navajo teacher was hired in Fort Defiance in 1884. Because of cultural and historical biases, people do not often hear about these programs, and the successes often go without notice.

She credits one of the Learn in Beauty partners, Rock Point, with an early, valuable bilingual teacher program that has produced an entire generation of qualified teachers and professors—all of whom were once described as young, at-risk students. Many of the teachers on the reservation at this time, she says, are graduates of the Rock Point program. A prime example is Rex Lee Jim,

who holds a degree from Princeton, and who is a successful Broadway playwright.

At Little Singer, Sorensen saw a decrease in the dropout rate from 20% to zero the next year, and although he is hesitant to say that this was entirely due to place-based learning, he is certain it is a factor. Little Singer has received a dissemination grant to take this curriculum to Native Hawaiians and other schools in the area..

Lockard's recent visit to Tuba City High School's Navajo language and culture class demonstrated the success of a bilingual oral history project that utilizes resources in the community, such as Peter MacDonald, a former tribal chairman. Interviews are conducted in Navajo and English, and students are using this material to put together a history of Navajo government. Before involvement in that project, not many students were interested in learning the Navajo language.

Not all of the benefits are to K-12students directly. Paulina Watchman reported that because of the hands-on science demonstrated in Canyon de Chelly, teachers who came to the school lacking strong science skills are now better science teachers.

Another important accomplishment from the canyon has been the development of a curriculum center that benefits Chinle and ultimately other reservation school districts. This includes an impressive astronomy curriculum that includes Navajo and Greek beliefs and traditional earth math.

Elders as Community "Higher Learning Institutions"

It is interesting to note that elders and knowledgeable community members are recognized as higher learning institutions in the place-based learning programs active on the Navajo reservation. In many of the schools, students are sent out into the community to learn from people to whom Tom Tomas refers to as "culture-bearers." Tomas and Justin Willie divide their time between Little Signer, Tolani Lake and the STAR School.

Where there is a tendency to value the knowledge of the elders, Lockard expressed a hesitance to say that every expert is elderly, as she has found many young parents and high school students who are wonderful resources within the community. Still, tribal elders can be an important component of place-based learning.

Tomas views service learning as a way students barter for the knowledge that the elders have to provide. "Kids provide service to that elder at his or her property, such as removing the bullhead stickers, cutting down the tumbleweeds, or strengthening the clothesline, chopping firewood, hauling water—all of these things teach the student to serve the elder and their community.

"The elders talk to the kids...sharing those cultural patterns just through the nature of [who] they are. The kids pick up on that and they develop that literacy and they take that within and it strengthens who they are," Tomas points out.

Willie described place-based learning as a kind of awakening, allowing students to be accepted into their natural world, much as a wild animal comes to know its own surroundings. In service learning on the reservation, Willie notes that students almost instinctively understand the cultural respect for elders.

"I've noticed the kids, when they go out to do service learning, they don't go directly up to the elders to start questioning them. They kind of work their way up to the elder. [If they were from] the mainstream culture, they would go up to directly address the elder, but in the culture here, we work our way into the realm of the elder first before we create these questions and address them," Willie notes.

"In service-based learning, the kids work their way up until they feel that acceptance. It's either body motion, eye contact, hand gestures or a verbal acknowledgment from the elder first," he says.

Sorensen has seen firsthand evidence of the meaningful connection between the young Navajo students and an elder. He says:

> In one case, some girls went out to an elder's house. She was crippled with arthritis and they ended up washing her hair. She was crying while they were doing it because it was really dirty, and she hadn't been able to wash it in who knows how long, and here these girls came who weren't even her real relatives and they were caring for her. Her tears opened the eyes of these girls to the problems there, and it's my belief that they will remember that experience and because of it, say to themselves that I'm coming back to the reservation, maybe become a social worker, and take care of the elders.
>
> It's a nice ideal to say we're going to bring our elders in, they are going to teach the kids what they know and the kids will implement it but it isn't as easy as that. There's a language barrier, elders are often monolingual Navajo speakers and students are often monolingual English speakers. There's a bridge that has to be built there of language.
>
> Another issue is that not everybody is a born teacher, so there are people that have great knowledge but they speak over the heads of the kids. So the beauty of doing something with elders that is focused on plants is that the kids and elders can do something that both can understand, where the activity becomes the center of attention. Some of our most wonderful experiences are where kids have gone out to elders and washed their dishes.

Conclusion

Out of a month of travels and conversations across the Navajo Reservation, meeting educators from several institutions involved in place-based learning partnerships, one demanding question emerged: How can an organization best support this innovative work?

Almost all believe that place-based learning is important to the survival of the Navajo language and culture, and that there is much more work to be done. But there is also concern for the continuation of that work; indeed, several projects have lost their impetus as key individuals moved on to new positions.

As Mark Sorensen notes, universities are a wonderful asset and a great way of connecting schools from various communities into a project like Learn in Beauty. "But a university has its own goals and bureaucratic structure. It's basically its own community. So the difficulty in something where the university takes the lead is that it can sound great, it can be working apparently, but it might not have any real commitment in the community. On the other hand, if the project is based in the community, it can tie into the university and I think we did that with Little Singer and NAU. Then a great collaboration can come out of that."

Sorensen believes that impassioned people within communities and institutions must be identified and linked. "The bottom line is, I think institutions only have as much commitment as the people that are involved, especially in groundbreaking work such as this. Institutions are conservative by nature, so what you have to do is find the people who say, 'Here I stand, I can do no other'[8] —It's not only that we have to do this work, but that if we don't, our communities on the reservation are going to be depleted, and like the land, dry up and blow away. "

Consistent with Sorenson's notion, in tracing the place-based partnerships on the reservation, the same names keep surfacing. Michael Fillerup serves as director of Bilingual and English as a Second Language Programs for the Flagstaff Unified School District, but has also taught at Chinle Junior High School. Mark Sorensen has been principal of Rough Rock, Executive Director of Leupp Schools, Inc., Director of Little Singer and a founding member, Director and President of the School Board at the STAR School. Dr. Daniel McLaughlin was once a principal at Rough Rock. Jane Lockard has moved from Chinle Primary to work in Kayenta. Paulina Watchman has persisted in finding backing for the projects she loves, steadily refining and redefining her work as she identifies funding to continue.

These observations add credence to Mark Sorensen's advice: "You find the individuals, you support them and their institutions, but you support them in a way that will set up a web of support among the local people—and you follow the dreamers."

Endnotes

1 A person of Navajo ethnicity must be at least one-quarter Navajo to qualify for enrollment in the Navajo Nation. Even full-blood Navajos must be officially enrolled to receive a Certificate of Indian Blood and a Census Number to qualify for benefits such as voting, services of Indian Health Services and tribal scholarships. One is not officially a member of the Navajo Nation without enrollment.

2 On October 11, 2002, Navajo and Hopi tribal leaders testified to the California Public Utilities Commission. In that testimony, Navajo Nation President Kelsey A. Begaye listed the unemployment rate on the Navajo reservation at 48%. Wayne Taylor, Jr., says that the Hopi unemployment rate was 60%.

3 Diné College, 2002–2003 General Catalogue.

4 Not to be confused with Diné College.

5 Some educators interviewed for this case study objected to the use of the term "at-risk" as applied to Navajo students. Justin Willie, Navajo, teaches Navajo agriculture and permaculture at Little Singer School, Tolani Lake and Star School. He stated that the closer Navajo people are to living a traditional lifestyle, the more "at risk" and "poverty status" they become in the eyes of the government — but from the aspect of the Navajo way of life, the richer those individuals actually are.

6 A young woman's puberty ceremony, celebrated after her first menses.

7 These schools consist almost totally of Navajo students. The small percentage of non-Indian children would be the offspring of teachers, doctors, or other non-Indian service providers on the reservation. One school reported 99% Navajo participation.

Acequias: Nourishment for People, Education and the Land

By Sylvia Parker and Jose Colchado

BEST COPY AVAILABLE

Introduction

Penasco, Raton, Pojoaque, Las Vegas, Pecos, Espanola, and Mora are strung "like beads on a rosary" across an area of northern New Mexico reaching from the Rio Grande through the Sangre de Cristo Mountains. Making up the Sangre de Cristo Communities and Schools Consortium (SCCSC), these villages were colonized by the Spanish in the late 1500s, 250 years before New Mexico became an American territory. The picturesque landscape varies from the red and saffron of the high desert, to the lush green of meadows along the rivers, the deep green of hills flecked with piñon and juniper, and the bright Caucasian of rugged snow-covered mountaintops. Viewed from above, the terrain is broken by what appear to be rivers and creeks but are more often a complex network of irrigation ditches called here and throughout the Southwest, "acequias."

In a region where the average rainfall is between eight and 25 inches annually, water is a precious resource. When the earliest Hispanics arrived in the region, they soon realized the necessity of collecting and distributing water to irrigate their subsistence farms. Native American farmers had already created elaborate water distribution systems nearby. Building on the experience of the Native Americans and the early Hispanic settlers, the acequia system was established in northern New Mexico and is still in use today. It is a community-based organization of people and resources used to create and maintain a network of irrigation ditches that provide water for the numerous family plots.

The acequia system required that the entire community commit to a common effort, establish and abide by rules directing its use, participate in its governance and management, and provide the labor for its maintenance. The highly organized acequia system became the structure around which the governance of all aspects of the community was built.

Because of the importance of water and the associated acequia system in the past, present and future of northern New Mexico, this case study focuses on New Mexico Highlands University's (NMHU) engagement with schools and communities on the issues of water use and conservation through a better understanding of the acequia system.

The Context

New Mexico is the fifth largest state in square miles in the United States. Of its 1.7 million people, 666,000 (39%) are under the age of 24. Some 511,000 residents are enrolled in school, 97% of them in pre-kindergarten through high school. Of the state's 1.1 million adults 25 years old and older, 238,000 (22%) have less than a high school diploma. Twenty-four percent have attained at least a bachelor's degree.

New Mexico's per capita income is $17,000. More than half of the 689,000 households have annual incomes of less than $35,000; 37% have incomes of less than $25,000 per year. Seventy-nine percent of families with yearly incomes below the poverty line have children under 18 years old.

New Mexico Highlands University (NMHU) is located in Las Vegas, New Mexico, and is the most northern of the state universities. Established in 1893 as a normal school, it enrolls approximately 3,000 students; 84% of them are New Mexico residents. Students are also drawn from other countries and states, primarily Texas, Colorado, Arizona and California. Fifty-four percent of the student body is Hispanic, 7% Native American and 3% African American. NMHU grants both bachelor's and master's degrees. The greatest number of master's degrees is awarded in education.

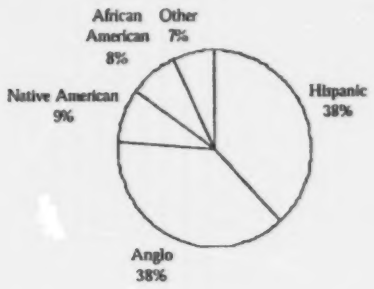
Las Vegas has a population of 16,000 and is the largest town in New Mexico northeast of Santa Fe. The state hospital is its largest employer; NMHU is the second largest. Las Vegas is the

economic, cultural, educational, and recreational center for this part of the state. Residents of the numerous small communities go to town for their groceries and other basic needs since opportunities at home are very limited. Youth have few outlets for their energy and creativity and many small communities are experiencing an increase in drug and alcohol use.

According to the 2000 Census, the communities in northern New Mexico are among the most impoverished in the United States, although their lifestyle is well supplemented by the natural resources around them.[1] The economy is based primarily on agriculture with some arts and tourism activities. Subsistence practices and employment are closely tied to the natural resources of the Sangre de Cristo and Jemez mountain ranges which have made it possible for these communities to survive.

The population is predominantly Hispanic, above 90% in almost all communities. Native American populations in these communities range from 0 to 9%. (Figure 2).

Figure 2. New Mexico Ethnicity (1.7 million residents)



Source: U.S. Census, 2000.

The Hispanic population settled in this area more than 400 years ago. Their deep-rooted, land-based subsistence traditions are still widely evident. Domestic practices such as family gardening and food preservation have remained unchanged for centuries. Families still depend on fishing, hunting and gathering to supplement their diets. Many homes are heated by wood burning stoves.

Most of these small communities have their own school districts and governing boards. The economic base to support the schools is very limited. Consequently, communities have difficulty providing the facilities and materials necessary for a quality education.

Valley Elementary and Middle Schools in Sena provide an example of the conditions under which schools in the region operate. The School Improvement Plan's "Indicators Hampering Improved Performance" noted that Valley Elementary has lost four principals and 22 teachers and assistants over the last five years. The schools have difficulty locating and hiring teachers and were not fully staffed during the 2001–2002 school year. They lack adequate supplies and appropriate amounts and varieties of library materials. Parents have low levels of educational attainment. Students cannot participate in after-school tutoring and other programs because they must leave when their buses leave. There is no nurse or nurse's aide and the schools have difficulty getting delivery of weekly food and other supplies.[2]

The high unemployment rate in the state, the low per capita income and lack of access to quality education and economic development opportunities put most young people and their futures in jeopardy. They are less likely to complete high school or go on to postsecondary education and are often destined for a life of poverty. Throughout this case study one of the underlying assumptions is that the work being described is impacting these vulnerable youth.

BEST COPY AVAILABLE

The Major Players: Partners Within New Mexico Highlands University

This case study examines the relationship between New Mexico Highlands University and several communities in northern New Mexico that have implemented place-based education, especially those that have focused their work around the acequias. The work examined has been coordinated through the university's Center for the Education and Study of Diverse Populations (CESDP) and one of its programs, the Sangre de Cristo Communities and Schools Consortium, which identified the acequia system as one of many areas around which to develop place-based learning experiences for youth. The university, the Center and SCCSC have all had extensive involvement with youth in these communities, separately and together, although the focus here is on just one area (acequia education). The information that follows comes from background materials, Web sites of the mentioned organizations, and interviews with 20 community members, teachers, school administrators, college faculty members and graduate students who have participated in the work. Discussions were also held with students in two classes.

CESDP was established at NMHU in 1987 under the leadership of Paul Martinez. While directing a group of technical assistance centers for the U.S. Department of Education at the University of New Mexico, Martinez recognized the need for an umbrella organization with multiple programs to address issues of rurality, diverse populations (especially Hispanic and Native American) and education. With the encouragement of NMHU President Gilbert Sanchez, he wrote a white paper suggesting that a center at the university could provide technical assistance, research and development, assessment and dissemination services in these areas, all with a strong focus on community outreach. The paper came to the attention of Pete Campos, a senator in the New Mexico legislature, who almost immediately introduced a bill to fund a "Diverse Studies Center."

Started with initial allocations of $100,000 a year, CESDP became a formal center at New Mexico Highlands University and now receives $250,000 through the university's annual appropriation request. Its primary mission is "to assist communities in improving the quality of education for all citizens in the state."

The CESDP identified five initiatives for the 2002–2003 academic year—producing quality teachers, developing instructional practices for student language acquisition, promoting community involvement and place-based education, implementing research-based strategies for promoting literacy, and providing data and models to support school reform. The Center has numerous contracts and grants and employs staff at the main campus in Las Vegas as well as in Española and Albuquerque.

The work described in this case study has been carried out primarily under what has become CESDP's "promoting community involvement and place-based education" initiative. In 1998, the Center hired Eric Romero and provided him with support in organizing a multi-school consortium and developing a grant proposal to the Rural School and Community Trust. The Sangre de Cristo Community and Schools Consortium (SCCSC) was formed with 13 school districts situated around the Sangre de Cristo Mountains in northern New Mexico. The purpose of the partnership is "to promote students' academic excellence by supporting community/school collaborations that promote place-based learning, learning which engages young people in academic work in the community that has an audience and purpose."

As Romero set about building a consortium and writing a proposal, New Mexico Highlands University lent its position in the education community to encourage area schools to participate in discussions about what their partnership with CESDP, NMHU, and the Rural Trust would look like. During these meetings,

community members were invited to discuss what they wanted to accomplish in the education of their children and the operation of their schools. They became familiar with the term "place-based learning" and soon realized that many of their practices that brought schools and communities together were, in fact, examples of place-based learning. Partnering communities discussed their ideas, needs and desires in numerous meetings that included teachers, parents and community members and shaped the goals of the SCCSC and the proposal submitted to the Rural School and Community Trust. The Rural Trust provided a grant to the SCCSC from 1999 to 2001 that was administered through the CESDP and NMHU. Romero became the director of the SCCSC and has continued to coordinate place-based learning activities on behalf of SCCSC and CESDP throughout the region.

Through the Consortium, NMHU has supported work with eight school districts in northern New Mexico on a regular basis and at least seven others periodically. The goal of the SCCSC place-based activities is to "engage students in learning about the place where they live and ways to preserve and sustain the best qualities of that place." Among these were activities related to water and the acequia system.

With support from NMHU and the CESDP, the Consortium organized the New Mexico Acequia Education Institutes. These annual institutes bring parents, students and teachers together to develop learning activities about the fundamental role of the acequias in community organization and subsistence. Many related activities, some described below, have developed in member schools and communities.

Work in Schools and Communities: Three Examples

Valley Elementary and Middle School

Valley Elementary and Middle School is located in the community of Sena about 45 minutes from Las Vegas. The school has about 200 students; 97% of them qualify for free or reduced lunch. The unemployment rate among Valley parents is above the state average. School facilities and library materials are grossly inadequate. The principal, Darlene Ulibarri, is the sixth principal in five years. Although she has only been at the school for one year, she is already providing much needed leadership. Ulibarri and Michael Tenorio described the work the school has been doing as part of the acequia project.

Tenorio attended one of the Acequia Institutes and, based upon his experience there, decided to develop a series of acequia-based learning experiences for his fifth grade class. During 2000-2001, he conducted science lessons based on water, its quality and accessibility. He also introduced some history on the acequia system. His students read and discussed the book, *The Milagro Beanfield War*, a fictionalized story about the conflict over water in northern New Mexico. He introduced language and vocabulary into his lessons using the "Acequia Glossary" provided at one of the Institutes.

Tenorio's students researched family stories and traditions related to the acequias. They conducted field research on water and soil quality and learned about permeability of soil, runoff, filtration, and the rate of water flow. They met with two *mayordomos*, the principal caretakers of two different acequias. From them the students learned about the roles and responsibilities of the acequia association members and about the yearly *fatiga* or ditch cleaning to maintain the viability of the ditch system.

Tenorio took his class to four sites where they cleaned the community parcels. The whole school participated in one fatiga. Students, parents and teachers all contributed by cleaning the ditch or providing food to the workers. "One of the best things about the fatiga," says Principal Ulibarri, "was that students got to see teachers in a totally different way, not in a student/teacher relationship. In some cases, it was a man-to-son relationship; they really listened and learned."

Students remarked about the importance of doing a good job in the ditch because they were there as designees or representatives of their families. In the past, the mayordomos would watch them to determine if they were good workers and could have influenced their future employment in the community.

The principal and Tenorio commented about the greater sense of community that develops when students and others participate in place-based learning such as that associated with the acequia project. Although the acequias are still in use today and essential to growing crops, few of the students had actually cleaned the ditches before. The experience gave them a greater appreciation of the entire system. "We learned how our grandparents had to work on acequias to survive," says one sixth grader.

Tenorio is already working with his sixth grade class to raise the students' knowledge about acequias to the next level and to involve them in more research. Among other projects being undertaken, students are developing an acequia history book based on the notes taken for one of the acequia associations that include everything from weather conditions to water allocations and business decisions. The school received the original notes taken by Mr. Sena (the music teacher), his father and his grandfather since the 1930s. In addition to learning about the acequias and their place, students will learn research skills working with original source documents.

Both Tenorio and Ulibarri acknowledge the importance of the education and support provided by CESDP through Eric Romero in initially sparking the interest in the acequias and subsequently providing support and ideas for how to broaden and deepen the learning experiences.

The school has also expanded its place-based learning into other areas of the region's agricultural history. Students created a storybook/ cookbook that combines recipes using local ingredients and family stories associated with important family events and celebrations. These students coordinated a *matanza* (community hog roast, butchering and feast) at the school during which they gained a greater understanding of "old ways" of food preparation and preservation by people in the area. Students learned about the construction of a *horno* (earthen oven) that was common to most households in the past.

Ulibarri attributes much of the school's improvement to place-based learning supported by CESDP. She cites her school's 2002–2003 Parent and Community Involvement Plan as an example of how the CESDP-supported acequia learning has become integral to the school's parent and community involvement efforts. The plan specifically identifies the development of cross-disciplinary units tied to state standards and benchmarks (including the study of the acequias) and active involvement of parents and community members in that work over a period of six years. The state department of education, in its review of the school, lauded the school's plan. The surprise is that while the school has been classified for three years as "in need of improvement," the state is "starting to look to them as a model school instead of an outlyer," according to the principal. Place-based learning linked to state standards and increased community involvement helped them avoid a state takeover this year.

Robertson High School History Class

James Gonzales teaches history at Robertson High School in Las Vegas and has attended the Acequia

Institutes with his classes. Gonzales' students had organized one of the Institute's meetings. They also participated in other institutes offered through the consortium, including the video production workshops. They demonstrated the melding of these different trainings with a student produced presentation on acequias.

As part of their study on acequias, students visited sites and photographed dams, creeks and ditches in the area. They used the photographs to create a calendar, which one enterprising student then printed and sold, including more than 100 to members of the state legislature. Students are now planning to make photographic postcards to sell.

As part of their acequia project, Gonzales took the students to the state legislature where they presented an exhibit of their work. The City of Las Vegas and the County of San Miguel supported their trip. Both these government entities recognized the value of promoting their communities by having students speak for them at the state capital. The students also took their local history presentations to the elementary schools to help students learn about the place where they live.

Because Gonzales also teaches history courses at NMHU, he encourages and supports high school students who enroll in NMHU courses through a dual enrollment program. He maintains that this is a very good way to prepare students for university study and encourages more students to attend college after high school.

Gonzales attributes his ability to engage students in place-based learning to a principal who "allows teachers to take chances." He acknowledges the importance of his association with NMHU and CESDP, which has provided him with moral and financial support. As one student says about the place-based learning that Gonzales facilitates, "It helps you get involved in the community."

Mora Elementary School

Nestled in the mountains, 6,000 feet above sea level, Mora Valley was once the wheat capital of the Southwest. It provided bread to workers who built the railroad to the West Coast in the 1800s. Fewer people own land now and much of it is pasture. Mora Elementary School, with 260 K–5 students, is at the heart of the community.

Four teachers, Florence Trujillo, Karla Sena, Ella Arrellano and Patricia Medina, described their work in place-based learning and the assistance they have received from the CESDP and NMHU. Teachers started participating in the Acequia Institutes three years ago. Last year, two of them, through the Community Academy for Science and Math (CASM), developed a series of science and math lessons based on the acequias and other local resources. This family learning program requires that parents participate in what are primarily hands-on learning experiences that reinforce math and science concepts. The participants meet monthly and teachers report 100% parental involvement. They report that student participation in the CASM program has resulted in increases on their science scores on standardized tests. They also report that the parents are clamoring for the after-school program since they enjoy the field trips so much.

The teachers described a number of other programs at NMHU with which they have been involved. They name with pride students who participated in NMHU-supported science programs and went on to major in the sciences in college and those who have careers in medicine or other science related fields. They described the Visiting Scientist Program that brought NMHU science professors to the schools to demonstrate science concepts and practices and to inform students about careers in the sciences. NMHU published a directory of scientists who were available to visit so they could schedule them in as needed.

The science fair at NMHU provides an opportunity for students and parents to visit the university and meet with people in the sciences. Another NMHU program, which they found productive, was the mentorship class that partnered new teachers with master teachers. They use these connections to NMHU to extend their students' and their own knowledge about water issues.

All of the teachers, along with students and community members, have attended trainings and conferences on place-based learning through SCCSC. Their students have benefited from presenting their work at these conferences, parents have learned how place-based learning supports learning measured by standardized tests and teachers have found allies in the efforts to reform education. The work on assessment conducted in neighboring Sapello has been presented to them and they have gained insight into alternative methods of assessing student and community learning.

The school's main emphasis is on getting superior readers so the perception is that they do not have much time for interdisciplinary projects. The Board of Education is primarily concerned with test scores so they have not been particularly supportive of this work. The teachers commented that Mora has a tradition of producing great minds. Now they need to figure out how to use them as a resource for their students and the community.

New Mexico Highlands University: Views from Within

Administrative Support of the CESDP

Paul Martinez, in speaking about the CESDP and its place in the NMHU organization, points to the new president of NMHU, Sharon Caballero, and a meeting she had with the CESDP staff. Demonstrating considerable knowledge about CESDP and its work in communities throughout New Mexico, she asked rhetorically, "Why isn't the CESDP the crown jewel of the University?" She expressed her desire for CESDP to become better known and recognized on the campus and to make their community-connected work better known around the state.

Clarence Sanchez, interim vice president of academic and student affairs and the second highest-ranking administrator at NMHU, described what he has heard the new president say about the need for change at NMHU. Changes may include reorganizing programs and departments and initiating new programs that will attract students and grant monies to the university, including a water management program. This program, Sanchez says, will address the growing water shortage problems in the state and position NMHU as a leader in identifying and addressing water issues.

Declining enrollments and the subsequent reduction in budget to NMHU drives much of the need for changes in the strategic plan. Part of the enrollment decline, according to Sanchez, stems from the university's inability to attract students from northern New Mexico. These students had previously enrolled at NMHU but state lottery scholarships have made it possible for them to attend other state institutions. He is knowledgeable of the work being done by the CESDP and states that they can play a "big role" assisting NMHU in obtaining monies for research, supporting student assistantships and helping students learn about and attend NMHU. He states that the CESDP exemplifies NMHU's sensitivity to the local culture and points to NMHU as the leader in preparing New Mexico's teachers, principals and superintendents.

New Mexico Highland University Faculty

Ken Bentson, chairman of the Department of Natural Sciences and professor of environmental science, described the change in the way science is taught in general education courses at NMHU. Students are coming to NMHU with biology as

the most advanced science course they have taken in high school. This puts them at a great disadvantage when they enroll in chemistry and physics courses. His experience with the Santa Fe Indian School with students conducting ecological surveys has confirmed for him that if students are engaged in science that is connected to their lives, they will learn more. Science instruction at NMHU is now focusing on process in addition to content.

The drought that has plagued New Mexico for several years has created a sense of urgency to get NMHU involved in water issues. Bentson cites the Watershed Management Program as one way the new president has encouraged the science programs to become more involved in addressing such issues.

Bentson proposes a program that he calls the "European Model." In this model, science programs at a university ask communities to identify problems that could be addressed through their science programs. Once problems are identified, students and faculty members devise programs of study and research to help solve them. One of the benefits of such a program is that students in the community are able to see science in service to the community and are encouraged to consider science as a college major.

The greatest challenge in involving faculty in community outreach is their heavy teaching load and the expectation that they engage in research and publish. Although there has been discussion in faculty meetings about the roles of faculty and the need for more emphasis on service to the community, the faculty has resisted the idea because it would take away from research.

A junior faculty member in the geology program, Jennifer Lindline, confirmed Benson's concern about faculty resistance to the requirement that they devote more time to service. As a new faculty member, she is expected to teach three to four classes per semester, serve on numerous committees and task forces, and conduct research and publish. In spite of this, she participates in several programs that reach students in the public schools.

The junior and senior science club sends NMHU students to local schools to talk about their interest in and experience with science. The NMHU students encourage young people to consider science as an area of study and describe the various science related careers. The science department also schedules high school student visitation days, during which faculty members present information about science careers and involve students in laboratory experiences. Lindline speaks with conviction about reaching out to youth in the community, informing them about the science fields and relating the sciences to community concerns. She serves on the Science and Education Council, which includes faculty members from the science and education programs in work with pre-service and in-service teacher training to help them teach science. She hopes that a new major in Watershed Management will help focus some university efforts on issues of water in the community and will recruit students from the area. She acknowledged that faculty members might not get involved in community outreach because they do not know how to do these things.

In the School of Education, Alice Menzor works with teachers in both pre-service and in-service programs. She spends a great deal of time in schools throughout the area and feels that the success of their outreach efforts is best exemplified in the Educational Leadership Program. This program recruits students from among practicing teachers in the area. Through this program NMHU places many of its graduates in positions as principals and superintendents in surrounding school districts. Menzor recognizes that this should provide NMHU with a network of people who are in leadership positions and can influence the type of learning and teaching that take place in area schools. She is not sure that this potential is being realized.

Another program that connects with schools is the Family Partnership Program. Through this program teachers in local schools can obtain assistance from NMHU to implement place-based activities that address community needs. Menzor frequently has Eric Romero of CESDP present the concept of place-based learning in her classes and supports students focusing their class projects on local issues and needs.

New Mexico Highlands University Student

Sylvia Rebello, a student in the School of Education, described the ways in which water issues and acequias had been part of an education course that emphasized connecting local issues to student instruction. Bulletin boards and lesson plans were developed to inform students about the acequia system. During her student teaching internship, she discovered that the teacher to whom she was assigned had been the president of a local acequia association. She became interested in how the acequia associations had impacted and were continuing to impact local government. She plans to write about this impact. She suggested that more students would conduct research or write their theses on issues of local concern if it were clear to them how they could connect their subject matter to local issues and if the faculty encouraged that connection.

University Engagement in the Communities Where These Schools Are Located

The university supports a number of CESDP/ SCCSC institutes including the Back to School Family Institute, which brings students, families and university personnel together at NMHU; the New Mexico Acequia Education Institute, which brings students, educators and community members together to discuss the history and future of the acequias; the Youth Leadership Institute which brings students together with leaders in the community and university; and the Videography Institute which has students practice videography skills with professionals and teachers in the community. The work done at Sapello on developing a portfolio approach to assessment included assessing both student and community learning and documenting the critical role community members played. The experience of the Valley Schools in getting community involved in the acequia learning demonstrates how much schools have come to value community involvement in student learning and been able to include it in their school's improvement plan. The Family Partnership Program based at NMHU's School of Education is one example of how ideas for learning that originate in the community are supported.

There is considerable evidence that NMHU, through the CESDP and the SCCSC, is providing the support to connect and involve communities in students' learning. This support has changed the way communities see themselves in defining and implementing student learning. It has also changed the way schools approach learning and how they define the role of community in student learning. Where NMHU has actively supported the community/school connection, there has been greater and higher quality community engagement.

The SCCSC project has helped to create an institutionalized center for continued activities at NMHU. The coordinating entity, the Center for the Education and Study of Diverse Populations has created a "center-within-a-center" organizational plan. As part of this reorganization, a Center for Rural Education Development (www.cesdp.nmhu.edu) has been established to further meet the needs of students, teachers, and communities.

This is not to say that there are not more ways in which NMHU could support place-based learning, community involvement and vulnerable youth through its traditional academic programs. Almost every individual at NMHU interviewed acknowledged that more could be done if faculty were reassigned time from teaching to working in

the community, if this work were valued and recognized in the retention, tenure, and promotion process, and if they were assisted in learning how to make connections. The new president's emphasis on community connections and praise of CESDP's work in this arena may portend changes in NMHU's operation that will further support the kind of work CESDP is now doing and get more departments and programs involved.

How the University, School, and Community View Their Connections

University programs that provide both pre-service and in-service professional development for teachers and others working in the community are essential to the well-being of the individuals and the organizations for which they work. Teachers and school administrators are often isolated because of distances, money to provide professional development is limited, and school personnel are desperate for assistance in meeting state standards and benchmarks. Most of them recognize that in order to address these issues, they must look to NMHU. It is nearby, it is affordable and the people there understand their needs and problems.

The university has had to face a harsh reality over the last few years: if people in the area and high school students in particular do not know the university and do not have contact with people from the university they are less likely to enroll. Now that students have access to state lottery scholarships, they have more options in deciding where they will go to college. The new president of the NMHU appears to recognize that it must expand its connection to schools and communities. She has proposed new majors like the Water Management Program that directly addresses the water needs of northern New Mexico. She is asking the faculty to reconsider where they spend their time, the relative value given to service in their workload and how the work of the CESDP can be made better known across the campus and around the state. She is interested in ways to connect the CESDP work to more departments and programs throughout the university.

There is some evidence from the discussions with the Vice President for Academic and Student Affairs and faculty members that the enrollment and budget crisis at the University has caused it to refocus on its connection and work with communities. Not only can the university provide needed assistance, dealing with the drought and other water issues and preparing youth and their parents for post high school education, but it must also connect to those communities and students if the university is going to turn its enrollment and related budget issues around.

How Place-Based Learning Has Engaged Vulnerable Youth

The NMHU and the CESDP partnership with the schools in the Sangre de Cristo Community and Schools Consortium (SCCSC) has provided youth with many significant opportunities to participate in place-based learning. They participated in the community discussions when the idea of the consortium was being developed. The SCCSC states that one of its goals is to "engage students in learning about the place where they live and ways to preserve and sustain the best qualities of that place." The details of this case study, which focuses on just one set of consortium activities (those around the acequias) reveal the various opportunities youth had to participate in place-based learning.

At Valley Elementary School, they conducted research and experiments on the acequias and the water carried by the acequias. They assisted in several *fatigas*, or community cleaning of the acequias. They are researching the history of the acequias and the acequia associations.

Students at Robertson High School produced a video and other historical presentations on the

acequias. Their calendar, which features pictures of acequias and other water related scenes, became a vehicle to communicate with legislators and others in their communities and became a money-making enterprise.

This work has led to more students participating in the dual enrollment program with NMHU. Students in Mora learned science through projects on water and acequias. Programs like CASM and the Visiting Scientist Program from NMHU reinforce science concepts. NMHU programs bring students to the campus to conduct science experiments during science days and to report on their own science projects during the science fair. If we extrapolate from the case study on the acequias, we can conclude that there are many more opportunities for student involvement we could document if all the other projects supported by the CESDP and the consortium were researched at the same level as the acequia projects.

Aspects of Place-Based Learning That Had Special Appeal to Vulnerable Youth

Place-based learning engages youth because it makes education real for them. When students research the history of the acequias, they become aware that an issue that is of present day concern to their families—the scarce resource of water—was also a concern of the Native Americans that were in northern New Mexico when the Spanish came to the American continent. They are able to see tangible evidence of the Native American and Spanish presence and are able to place their ancestors in the historical timeline that extends back 400 years. When students participated in learning experiences that also benefited the community they came to recognize that they are important members of the community and can contribute to its well-being.

In helping to clear the acequias, they were given responsibility equal to that assigned to adults in the community. Students saw that when they met their responsibilities their contributions were important and valued. People who are important to them, their friends and neighbors, and people of high status in the community like the mayordomos assessed the work of cleaning the acequias. Students were able to self assess their work when they saw whether water flowed evenly and easily through the acequia.

Students saw their teachers as human beings who worked alongside them on important issues—not because it is part of some benchmark or state standard, but because it was vital to all their lives. Success in the learning experience was not just about a grade but also a connection to the community.

Students in the high school stated that place-based learning got them involved in the community. Their work on acequias made it possible for them to meet and talk with legislators about a critical issue to their community. When they were asked to represent the city and county at the capital they were elevated in the eyes of the whole community and their peers. Their ability to create and sell a calendar demonstrated to them that work they do in school has the potential to become a money-making enterprise, which was an important goal to them. Students enjoyed taking on the role of teachers. They had more knowledge about PowerPoint than their teachers did and they were able to share their knowledge of local history with elementary school students.

When students participated in the science programs at Mora, they saw their parents engaged in learning with them. This communicated to them that their parents value learning and encouraged them in their involvement. They responded very favorably to the hands-on nature of the science projects. One of the great benefits from involvement in place-based learning has been that the consortium conducts many regional meetings where students are able to present their work to other students and to teachers from other schools. The students' favorable reaction to this

comes not only from the opportunity to travel outside their community, but also from positive feedback from the people who have heard their presentations. Teachers have found that the opportunity to present their work is a motivator for students to undertake their research, study and produce more seriously.

The students in northern New Mexico have experienced learning that enhances their sense of belonging. When their work is in the community, the public nature of their work provides the opportunity for them to have their work assessed by a wide range of people. Work that is well done and contributes to the well-being of the community gives them recognition and enhances their self-esteem as learners and community members. Working with adults on meaningful work changes the relationships they have with those adults in ways that create understanding, empathy and acceptance of differences. When the work is connected to things that are meaningful to the students they are more inclined to take the work seriously and to make the connection between what they are being taught in school and the things that are of concern to them. Ultimately, students' desire to be in school encourages them to strive for greater academic success.

Endnotes

1 2000 Census

2 Valley Elementary and Middle School's Parent and Community Involvement Plan for 2002 through 2008. EPPS/Parent Community Involvement Aligned Goals.

University-Community Partnerships: Addressing Community Issues Through Alternative Media

By Martin Newell

BEST COPY AVAILABLE

Introduction

Central Appalachia, specifically the communities that lie on either side of the Kentucky-Virginia border, is one of the most depressed places in rural America. Anti-poverty efforts have poured money into the region for the past 40 years but have largely missed many of the hollows and coal camps that have been the region's economic lifeline for nearly 100 years. Nine decades of coal mining, including the strip mining of the past 35 years, have severely scarred the land. The land that remains unscarred is spectacularly beautiful, a cruel contrast to the environmental devastation all around.

An article entitled "Places Called Hope, Places Called Hopeless," which appeared in the June 2000 issue of *American Demographics*, mapped the country by how likely people were to agree that their communities offered no options for them. Responses from the Appalachian region showed a great deal of despair and hopelessness. Today, one miner can produce the same amount of coal that it took 100 miners to produce two generations ago. Transfer payments are the principal economic engine and the school system is the largest employer in the majority of counties. The schools are almost all Title I eligible. Unemployment runs high, but the official rates do not begin to reflect the vast numbers of people who long ago gave up looking for work in the public sector. Hope is in short supply and people are leaving the region more rapidly than they have since the last coal boom ended in the mid 1970s.

The role of public education as major employer is often at odds with academic goals. Kinship connections sometimes trump qualifications when personnel decisions are made and the need to buy locally can result in higher payments for services. The reform efforts that produced the 1990 Kentucky Education Reform Act (KERA) removed some of the economic conflict from the process and made strides toward funding equity across the state. However, subsequent legislative action blunted that landmark work to some extent. The assessments envisioned in KERA have been altered to lean heavily on testing, turning away from alternative, portfolio-based assessments.

Virginia came later to reform work and focused its efforts on accountability through the Standards of Learning (SOL). High stakes tests drive the curriculum in much the same way that the Kentucky Core Content Tests do on that side of the border. Both states also use non-academic data as part of their assessments.

Administrators point out that the pressures of high stakes testing and the demands of more detailed accountability make their jobs harder and take teachers' time away from instruction. The striking rate of principal turnover supports those feelings. Teachers wonder when they became the enemy and the outsider in the community.

This study focuses on the use of community media in schools enrolling high numbers of vulnerable youths in nine Kentucky and five Virginia counties and the engagement of higher education institutions in that process.

They reach from Powell County, Kentucky, in the foothills of the mountains to Montgomery County, Virginia, which is mid-way up the valley toward Roanoke.

The 2001 U.S. Census estimates describe the nation's population as just under 70% (non-Hispanic) Caucasian. This study focuses on a region for which that demographic exceeds 95%.

The non-Caucasian and Hispanic populations of Virginia and, to a lesser extent, Kentucky, far exceed the percentages in the mountain counties in this case. The core area for this study is one Virginia and three Kentucky counties that have fewer than 4,500 people in a total population of more than 128,000 who identified themselves as a race other than Caucasian in the 2000 Census.

Table 2. 2001 Population Estimates

Population 2001 estimate	USA	KY	VA	Study	w/o Montgomery
Caucasian	75.1%	90.1%	72.3%	95.8%	97.3%
African American	12.3%	7.3%	19.6%	1.9%	1.5%
Native	0.9%	0.2%	0.3%	0.2%	0.2%
Asian	3.6%	0.7%	3.7%	1.0%	0.3%
Pacific Islander	0.1%	0.0%	0.1%	0.0%	0.0%
Other	5.5%	0.6%	2.0%	0.2%	0.1%
Two or more races	2.4%	1.1%	2.0%	0.8%	0.6%
Hispanic (any race)	12.5%	1.5%	4.7%	0.9%	0.7%

The Players

The focus schools in this case are affiliated with the Appalachian Rural Education Network (AREN) and its partner higher education and nonprofit organizations. AREN's formation was inspired by the Annenberg Rural Challenge and was initiated by a group of non-school organizations that solicited the participation of 10 schools.

Non-School Partners

The Appalachian Rural Systemic Initiative (ARSI) is a project of the Kentucky Science and Technology Corporation (KSTC) headquartered in Lexington. ARSI has received several grants from the National Science Foundation to improve instruction and learning in mathematics and science in distressed counties within the Appalachian portions of Ohio, West Virginia, Kentucky, Virginia, Tennessee, and North Carolina. ARSI established *Resource Collaboratives* at **Ohio University, Marshall University, the University of Kentucky Community College System, the University of Virginia at Wise, and the University of Tennessee** to provide direct services to principals and teacher partners at each participating school as well as instructional supervisors within the school district office. Five schools in the first cohort participated with ARSI as Catalyst Schools and the others were able to participate in trainings offered by ARSI. Wimberly Royster serves as the Principal Investigator for ARSI. The directors of the Resource Collaboratives at the University of Kentucky (UK) and the University of Virginia at Wise (UVA-Wise) provided support to AREN\schools.

Appalshop, based in Whitesburg, Kentucky, is the largest rural arts organization in the country. Appalshop began during the War on Poverty to train mountain young people for work in the film and television industries. The young people involved in those early years quickly decided to develop jobs at home that would utilize their skills rather than work in the mainstream media. That tradition lives on through the **Appalachian Media Institute (AMI)**.

AMI engages rising high school juniors and seniors in a six-week summer residential experience to learn video production skills. The summer program culminates in a screening in Appalshop's theater for family and community members. AMI continues to work with students and a contact teacher during the school year to share the skills learned within the participants' schools. All of the high schools in the first cohort had students participating in AMI during more than one of the past five years.

The AMI summer staff has largely consisted of program graduates. David Sturgill and Maureen Mullinax have served as AMI directors since AREN began. Dee Davis was executive producer of Appalshop Films, the organizational unit housing AMI.

Southeast Community College (SECC) is a part of the Kentucky Community and Technical College System (KCTCS) with campuses in

BEST COPY AVAILABLE

Cumberland, Whitesburg, and Middlesboro. SECC became involved with AREN very early in its life, providing approximately half of one faculty member's time to serve as a Circuit Rider for the network. AREN began while the community colleges were a part of a University of Kentucky statewide system. The KCTCS was created as a part of Kentucky's higher education reform. The legacy of its affiliation with the University of Kentucky is still evident within SECC, which sees its role as vastly different from the technical schools with which they are now affiliated. The predominant view is that they are the beginning steps toward a four-year degree for most of their students.

Bruce Ayers is the president of SECC and an active supporter of K-12 education in its service area. This institution's commitment to linking student learning to community needs and interests grows from Ayers' leadership in crafting a shared vision of the school's mission beyond its campuses. Madeline Gibson, who teaches Appalachian Studies and English on the Whitesburg campus, served as the AREN Circuit Rider for two years and continues to be involved with the work. Robert Gipe teaches Appalachian Studies on the Cumberland (Main) campus of SECC and directs its Appalachian Center and Archives. Gipe was the director of AMI at Appalshop and prior to coming to SECC was a member of the Annenberg Rural Challenge's field staff.

The University of Kentucky Appalachian Center (UKAC) is on the main campus in Lexington and is a multidisciplinary unit within the Research and Graduate Studies division. UKAC is unique within UK in that it holds a mission of service to communities in equal regard as its research and instructional goals. Faculty Associates of the Center come from most of the colleges within the university, the community college system, and other institutions. Ron Eller directed the Center at AREN's beginning. Eller is an historian and at the time of the AREN launch served as the chair of the Governor's Kentucky Appalachian Commission. Martin Newell had come to the UKAC to work on the creation of that Commission and stayed to work on service projects within the region. He joined Wimberly Royster (ARSI) and Dee Davis (Appalshop) as AREN Co-Directors.

Public Schools

The schools in this study come from two groups: AREN member schools and schools within Southeast Community College's three-county Intermountain GEAR UP service area.

The Kentucky AREN schools in the study are Cordia School (Lotts Creek Community); Evarts High School; G. F. Johnson Elementary School, Jenkins Middle/High School; Johnson Central High School; Johnson County Middle School, Jones Fork Elementary School; Leslie County Middle and High Schools; Letcher High School, McDowell Elementary School; Paintsville Elementary School; Shelby Valley High School; and Stanton Elementary School. The Virginia schools are Auburn High/Middle School; Bland High School; Craig County Schools; L. F. Addington Middle School; Mt. Rogers Combined School; Powell Valley Middle School; Rocky Gap High School; and St. Paul Elementary and High schools.

The Intermountain GEAR UP project is a partnership of Southeast Community College and **Mountain Empire Community College** (located across the mountain in Virginia); 10 public schools including five high schools and their feeder schools—Fleming-Neon Elementary School, North Evarts Elementary School, Verda Elementary School, Black Mountain Elementary School, Appalachia Virginia Elementary School, Appalachia Virginia High School, Harlan High School, Evarts High School, Fleming-Neon High School, and the Pineville Independent School District; and community partners representing health care providers, financial institutions, cultural organizations, media and technology

businesses, senior citizens groups, and other local organizations.

The study schools represent 16 local educational agencies in 13 counties: Bell, Floyd, Harlan, Johnson, Knott, Letcher, Pike, and Powell in Kentucky; and Bland, Craig, Grayson, Montgomery, and Wise County in Virginia.

The schools are generally experiencing declining enrollments. Shelby Valley High School is in its eleventh year with just under 600 students in 2001–2002. In 1998–1999, the school had 690 students. The Letcher High senior class had 81 students in 1999 and only 44 students in 2002. The Kentucky schools are generally larger than those in Virginia, with five of the schools having more than 500 students. Nearly half the Virginia schools have fewer than 250 students and only one has as many as 500.

The Work in Schools and Communities

Appalachian Media Institute (AMI)

Appalachian Media Institute (AMI) is rooted in the community media and rural arts models of Appalshop, a media arts and education center in eastern Kentucky. Since 1988, the program has been working with young people, educators and communities in eastern Kentucky and southwestern Virginia. In 1998, AMI received one of the inaugural "Coming Up Taller" awards from the President's Committee on the Arts and Humanities for its innovative arts work with youth.

AMI manifests a logical extension of Appalshop's work to students and teachers in the region near its headquarters in Whitesburg, Kentucky. The connection of the nonprofit arts agency is primarily with individual high school teachers and secondarily with the school administration. The teachers nominate students for the summer residency program and then provide support for the work during the school year within their classrooms. AMI works with partner schools throughout the year through artist residencies, teacher workshops and place-based media production projects for high school students.

Young people work with AMI to learn how to use video cameras and audio equipment to document the unique traditions and complex issues of their mountain communities. AMI offers an intensive summer institute and year-round media literacy and production training with youth, teachers and community groups in central Appalachia.

AMI's goals are to develop the critical and creative skills of young people and to involve them in their communities and the world by making and sharing media. Participants share their work through local screenings with community members of all ages and through exchanges with young media-makers from across the country.

The work during the school year produces a variety of projects driven by the students' interests and class requirements. Some examples follow.

Letcher High School

Sixteen seniors in Jane Dixon's English class were asked to think of something or someone who had played an important part in their notion of who they are or want to be. Students were then asked to collect images and objects that represented what they had chosen as their subject and to write and record in their own voice a short narration of those things. Using a scanner and nonlinear editing software, the students combined the two in the form of sixteen short videos screened at Letcher High School last spring.

Teachers involved with place-based work at Letcher also took part in media training. One example of this is a workshop conducted by Maureen Mullinax, director of AMI, after Letcher sent its first students to AMI and purchased its first video technology. Dixon says this workshop

was helpful in several ways. First, it allowed the teachers to obtain their required professional development hours. Second, "it allowed the teachers to learn how to develop a project that was place-based, that was student-centered, that was attached to their subject matter, but that also allowed students to explore something about their place—their family, community, or whatever." This workshop provided teachers with knowledge of their newly acquired technology and was directly responsible for spawning several other place-based activities at Letcher.

Cordia High School

Students at Cordia High School are in the planning phases of a video documentary about the lack of access to emergency medical care in their rural area. After several accidents recently in their community, these students are investigating why it takes so long for ambulances to arrive to transport people to the hospital.

Fleming-Neon High School

Youth participants working through the school's 21st Century Community Learning Center have formed an after-school media club with the help of coordinator Pauline Collins and AMI. They produced an audio piece about the reaction of local youth and community members to the events of September 11, 2001, and a photo journalistic look at their town.

Some of the documentaries that students have produced during the summer residency program include interesting titles that tell stories from the region's past while looking to the future.

A Hero's Welcome: Vietnam Vets Return Home to the Mountains chronicles the experiences of men from eastern Kentucky who fought in Vietnam and returned to the mountains to find challenging emotional and economic situations. The video reveals both their feelings of abandonment by the government and their fellow Americans and the power of gathering with other veterans to develop pride in themselves and their service for their country.

Blood Stained Coal: The Scotia Mine Disaster tells the story of the 1976 Scotia mine disaster, the result of two explosions caused by unsafe work conditions. Through poignant interviews with rescue workers and friends and family members of the 15 miners and rescuers killed in the explosion, this documentary explores the disaster's personal and political impacts.

Sankofa: Backtracking the Underground Railroad in Appalachia, through interviews with scholars and museum curators, explores the presence of the Underground Railroad in northeastern Kentucky. The spirit behind "sankofa," meaning "we must go back and reclaim our past so we can move forward," guides the presentation of this part of Kentucky's history. Footage of hidden compartments that harbored runaway slaves in houses of conspirators, and stories and songs passed down from those who escaped across the Ohio River at the Kentucky border set the chilling mood of this piece.

Trials, Troubles, and Tribulations examines the legends surrounding the murder and hangings of Bad Tom Smith and Floyd Frazier. The film uses interviews with reporters, historians, and descendants of both murderers and victims to create a portrait of local heritage. The lingering prominence of the murders in community lore inspired this haunting historical portrait of events in two eastern Kentucky counties.

McRoberts: Eastern Kentucky Coal Camp features residents of an eastern Kentucky coal camp discussing the town's past, present and future in an era of economic downturn. Through interviews and archival footage, McRoberts is remembered as a clean, bustling town that promoted racial equality and neighborliness. With the closing of coal mines, the town maintains a sense of pride and unity in the face of a declining economy and population base.

The Role of Higher Education in AMI

The Appalachian Rural Eduation Network's (AREN)'s support of AMI was important. The two held well-synchronized missions from the beginning. Martin Newell of the Appalachian Center at UK was, and is, critical for AREN's vigor. He continues to be a strong advocate for AMI's work, but is not critical to its survival. Robert Gipe at SECC is called a "mentor" by Mullinax but is not engaged in a formal institutional sense. Both are former Appalshop staff members who remain engaged in the organization's work and the keys to its relationship with higher education and the community. The two institutions have provided venues for screening work and the Appalachian Centers at both have supported individual AMI program graduates pursuing postsecondary work.

Appalachian Rural Education Network (AREN)

The AREN program was different at each site reflecting the network's key strategy of not imposing any network-wide programs or dictating how a particular place would achieve its mission. There were some commonalities among the sites and some better practices shared across the network.

- The AREN Circuit Rider strategy amounted to using a loaned faculty member from a community college or a teacher from one of the schools to carry better practices across the network and help put faces to the work. This was a very successful part of the design, owing most to the talents of Martha Risner and Madeline Gibson, the two individuals who filled the role. They brought different skill sets to the work. Risner is an art teacher and artist; Gibson is a teacher of Appalachian Studies and English.
- The collection of oral histories allowed great interaction with community.
- Music is a strong part of many places and offered community people an opportunity to be the experts.
- The Appalachian Rural Systemic Initiative's participation brought great resources for math and science instruction across the network. The place-based nature of the work at AREN schools reshaped ARSI's approach in other places within that network.
- The partnership with Appalshop yielded many and varied media projects and an ongoing relationship between the schools and the youth-directed Appalachian Media Institute (AMI).
- Regional literature was alive in most of the sites. Faculty from UK and SECC helped craft this work.
- There was a thread of youth leadership and activism present in many of the sites. It might have been an organized group or not, but student voice was heard.
- Each site participated in documenting the work and contributing to an extensive report prepared by the University of Kentucky Appalachian Center. The most intense participation was from Cordia and St. Paul, serving as national Rural Trust research sites.
- There continues to be a fair amount of publication from AREN's work. Articles have appeared in scholarly journals (*Journal of Research in Rural Education*) and mainstream press (*Appalachia* magazine, local papers, and the Lexington *Herald-Leader*).

Other specific examples of the work follow.

Rocky Gap High School, Virginia

John Dodson became interested in place-based learning while conducting a local history program with his students for a number of years. Much of this work has involved scanning old photographs and cataloging historical cemeteries. The Annenberg Rural Challenge grant allowed him to put a frame around what he was doing to enhance this work, to network with other groups, and to "spread the word about place-based education," he comments.

"We were doing this, and I really didn't have any kind of philosophy to attach to it, but once we got into the AREN network, I became familiar with place-based education and how it applies across the curriculum, and could look at teaching and education in a broader context, I think."

One example of this broader context was in Dodson's "Local History and Technology" course, which explores the "problems that all rural communities are having—how do you preserve the quality of life, create jobs so kids will stay."

Dodson discussed the problem of "brain drain" shared by these communities, that "when kids get educated, they leave." By merging place-based education and technology, Dodson is working on a model of "Preserving the Past, Preparing for the Future." He designed the program to give students technological skills they will need in the future. However, the focus is not on merely learning computer applications. Rather, the students focus on "deciding what you want to do, and then figuring out how to do it." The students have developed an award-winning Web site and a digital database for their oral history work, and are moving into video production, all centered around the goal of their place-based education work, which is "managing the contents of their archives."

Jones Fork Elementary School, Kentucky

The selection of Jones Fork as an Appalachian Rural Systemic Initiative (ARSI) "catalyst school" contributed greatly to its success in the work. The school has integrated place-based science work in all the grades, including a study of watersheds and local wetlands by the self-contained eighth grade class, inspired by a watershed disaster in Martin County.

Their project has centered on the attempt to clean up the stream that runs through the center of the Jones Fork School grounds by removing a number of old cars from its bed and banks. The school conducted the work as part of the Eastern Kentucky PRIDE (Personal Responsibility in a Responsible Environment) program. The class is together for every course throughout the school day, which has lent itself to an interdisciplinary approach to learning. As part of the requirements for this class, students were to create, research, and develop their own project, ultimately presenting it at an AREN meeting. Wall posters indicate that the students in this class are taking a very holistic, interdisciplinary approach to place-based work. One Venn diagram shows the intersection of the fields of agriculture, forestry, and coal mining, and how these, in turn, intersect with arts, community, and the environment. The students say they constantly refer to this diagram throughout the year to remind them of how their subjects "stick together." The class's work for the year has been grouped under the title, "Values, Relationships, Beliefs, and Effects of Change Related to Agriculture, Mining and Logging in Eastern Kentucky."

The University of Kentucky College of Agriculture, through extension and staff at their Robinson Forest Research Station, has supported the work at Jones Fork in the form of resource people and curriculum.

Intermountain GEAR UP

The program is in its third year with the first cohort now in ninth grade. The work of Intermountain GEAR UP flows from three documented needs: (1) students' lack of skills and experiences needed for college; (2) community-wide higher expectations for all students; and (3) a better system for monitoring and responding to individual student needs.

Intermountain GEAR UP developed 14 action strategies to meet those needs. The place-based manifestation of those strategies is visible in arts programming, literature, and many activities designed to enhance self-esteem. This reflects the involvement of Robert Gipe in the program's

design. His work with Appalshop in AMI and other arts education projects, along with his knowledge of and commitment to place-based work, informed the GEAR UP program plan and its ongoing operation. Martin Newell, of the UK Appalachian Center and AREN, participated in the program's design and continues to support the work.

The Research Questions

How the Higher Education Institutions Engage Communities

The University of Kentucky supported AREN from the first meeting of potential partners. The school's president set aside funds to hire the co-director through the Appalachian Center. The Center continues to provide staff assistance in specific projects and the Network's research agenda. The dean of the College of Education urged the faculty there to become involved. Faculty in the School of Music and the College of Arts and Sciences lent energy and advice to specific aspects of the work.

The sum of this high-level encouragement and individual interest still does not rise to the level of institutional engagement. The schools and communities within AREN and Intermountain GEAR UP are too far removed from the Lexington campus to command sustained interest as research partners beyond the systemic interest of the Appalachian Center.

On the other hand, the mission of Southeast Community College puts it squarely in the life of the communities and schools in its service area. The administration, faculty, and student body know the community: it is their home. The GEAR UP program and release of Madeline Gibson to serve as AREN Circuit Rider are just two of many examples of how this engagement is manifest.

SECC offers scholarships to vulnerable youth through a program that begins as the student enters one of the high schools in the area. Southeast Scholars receive a tuition-free education that begins at SECC and continues at one of the state's four-year public colleges upon successful completion of secondary school. The program design is not particularly innovative. Its existence at all within the community college is the telling factor.

How the Higher Education Institutions, Schools and Communities View Their Connections

Maureen Mullinax (AMI) summed up the view of UK's involvement, saying, "I never really thought of Martin [Newell] as coming from UK." Other community members, teachers, and administrators across AREN echo this sentiment. The connection people made was usually with *individuals* at the university and in one case the Appalachian Center but never with the institution as a whole. Individuals within the university generally agreed with that assessment; they might be engaged with communities and schools in the region but there was not an institutional commitment that merits its being called "engaged." The exception was the Appalachian Center where there is some sense of institutional engagement.

The picture is very different at SECC, where everyone involved saw themselves and their institution as truly engaged with their communities. The key difference is that these were indeed "their" communities. Robert Gipe, Madeline Gibson, Bruce Ayers, and other staff live in the districts in the study. They send their children to those schools. It is not an academic exercise for them that those schools and students succeed; it is a paramount concern. The communities share that need and see SECC as integral to achieving success.

How Vulnerable Youth Have Been Engaged in Place-Based Learning

The work described here has been inclusive of a broad range of students in the schools. The AREN work at the elementary level involves all the students in most instances. The high school work reaches across any tracking to greater and lesser success. Some of the work has tended to be with fourth-year and college preparatory classes. This tends to reduce the percentage of most vulnerable youth within those groups. AMI has insured that a large percentage of the program participants could be called most vulnerable. GEAR UP works with every student in each grade level involved.

Aspects of Place-Based Learning With Special Appeal to Vulnerable Youth

Place-based learning has broad appeal for students. It just makes sense. There is a special appeal of media work for students who have difficulty with text-based learning because the field is leveled for them. Children who are vulnerable due to inadequate reading or writing skills are as media literate as their classmates. The ability to tell a good story in a documentary video or take a photograph that evokes a feeling of place is not dependent on the same set of skills as most classroom learning. The arts hold great promise as a means of engaging young people who are disaffected or at a disadvantage in verbal and mathematics skills.

A Look at the Numbers

Virginia

The schools in the sample are small, even by rural standards, with only one having more than 300 students. This sometimes makes for testing cohorts of 8–10 students, not a viable sample in most cases. In the case of Mt. Rogers Combined School, there are no grades with more than 15 students.

Table 3.
AREN School SOL Scores as a Percentage of the Virginia Average

Grade 3 History	1998	2002
	84%	87%
Grade 5 History	1998	2002
	77%	95%
Grade 8 History	1998	2002
	74%	102%
U. S. History	1998	2002
	68%	89%
World History	1998	2002
	81%	97%
Grade 5 Technology	1998	2002
	88%	101%
Grade 8 Technology	1998	2002
	69%	105%
Earth Science	1998	2002
	102%	108%

Source: Virginia Department of Education, Division of Assessment and Reporting

Trends can still be drawn from the data with the caveat that occasional variances can be attributed to something as inconsequential as one child missing the test because she was out with a cold.

AREN's Virginia schools have kept pace with the rest of the state in most academic content areas but have made gains in history, computer technology, and earth sciences. These were all areas of concentration for the schools through their work with place-based learning and with ARSI.

BEST COPY AVAILABLE

Table 4.
St. Paul Elementary SOL Scores as a Percentage of the Virginia Average (3rd Grade)

English	1998	2002
	83%	96%
Mathematics	1998	2002
	64%	87%
History	1998	2002
	63%	90%
Science	1998	2002
	64%	83%

Source: Virginia Department of Education, Division of Assessment and Reporting.

A Deeper Look at St. Paul Elementary

This school was only somewhat involved in place-based learning in 1998 when its scores were more than 36% below the state averages in three of the four content levels tested. It became greatly involved in AREN in the fall of 1999 and worked closely with St. Paul High School. The high school was part of the initial AREN cohort. The most recent testing cycle shows the elementary school narrowing those gaps dramatically.

Table 5.
AREN School CATS Scores as a Percentage of the Kentucky Average

	1999	2002
Elementary	99%	106%
Middle	86%	95%
Secondary	90%	85%

Source: Kentucky Department of Education, Office of Curriculum, Assessment and Accountability.

Kentucky

It is a bit more difficult to extract data from the Kentucky schools in the sample. The testing standards have changed several times in recent years but some aggregate information is available.

The elementary and middle grades tested made gains against the statewide average over a four-year period that can be reasonably used for analysis. The secondary schools lost ground in their academic scores.

There is a hopeful sign for the high schools in the sample, however. These schools retained a significantly greater number of their students, lowering the dropout rate from just under 5% to 3.5%.

Conclusion

The one academic area in the Kentucky tests that one would expect to see gains is in the arts and humanities. This encompasses much of the material that would have been affected by the school's place-based work. AREN schools improved their scores in this content area by 37.7% over the period for which data are available.

BEST COPY AVAILABLE

The Missouri Education Renewal Zones

By Vicki Hobbs

BEST COPY AVAILABLE

Introduction

The Missouri Education Renewal Zone (ERZ) Initiative is an emerging state-based education model whose goal is the reinvention of rural teacher education in the context of the appropriate application of technology in rural schools and communities. Each of three zones centers on a teacher education institution partnering with 10-15 rural K-12 school districts in geographic or virtual proximity to the college, and multiple statewide teacher and technology support organizations. Because Missouri exhibits an array of both the challenges and resources evident in many other states with respect to rural education, the idea emerged within the Rural School and Community Trust to create a holistic approach that simultaneously addressed both the problems of rural teacher training and supply, and the opportunities afforded by the application of appropriate technology. The initiative, therefore, is a merger of the community-based educational philosophy of the Rural Trust, the needs of small rural schools in Missouri, and the opportunistic positioning of Missouri's educational institutions and infrastructure.

Missouri is suffering a critical teacher shortage in several curricular areas, but it is rural schools that are most profoundly affected by such shortages. Rural schools find that the teachers they attract are, after intensive on-the-job training in the classroom, highly marketable to larger districts at salaries far beyond those paid by rural schools. Poorer rural schools simply cannot attract and retain the teachers needed to offer a quality curriculum.

But Missouri also has a fairly extensive technology infrastructure. Approximately 98% of its 524 school districts have access to state and E-Rate subsidized T-1 lines for Internet access, while more than half of them have some form of videoconferencing or two-way interactive television capabilities. A statewide data and video backbone makes cross-district and cross-consortium access to distance learning courses at least potentially possible. However, the lack of school technology support personnel, coupled with the inequitable access to modern technologies and lack of technical and organizational resources, plagues smaller and rural schools.

The ERZ initiative is proceeding on three related, but divergent fronts. The Northwest Missouri ERZ is initially focusing on the simultaneous renewal of school and community through collaboration between a public teacher education institution and the Healthy Communities for the Midwest Four Corners. The Central Missouri ERZ is building on a private higher education institution's partnership with a technical college to create a distance learning-assisted, 18-month training and degree program for school technology coordinators. The Southeast Missouri ERZ is comprised of two zones—one in the Bootheel, the other in the southeastern Ozarks—with initial efforts focused on expanding professional development opportunities to rural teachers and the creation of a new model for rural "Professional Development Schools."

This case study focuses on the critical role of the higher education institutions involved in the ERZ initiative and the nuances that have led them to rethink their role as teacher training institutions in the context of meeting the needs of rural schools, and to understand their direct and important impact on the vulnerable rural youth of Missouri. In only its earliest stages of implementation, the Missouri ERZ Initiative is committed to creating long-term, systemic change which builds capacity from within, given a minimum of external resources.

Why Missouri?

Missouri is in many ways a microcosm of the nation. In no other state is there a convergence between the corn belt of the North and the cotton belt of the South, while St. Louis leans to the East and Kansas City leans clearly to the independent

West. Flanked by two major metropolitan areas, nearly one-third of Missouri's population is defined as rural.

In 2000, per capita incomes for the Central, Northwest, and Southeast Missouri regions were $24,571, $22,202, and $20,120 respectively, considerably less than the $27,206 for the state as a whole. Central and Southeast Missouri accounted for the third and fourth largest regional concentrations of African Americans among the eight Missouri regions, ranking only behind Kansas City and St. Louis.

While the population of Northwest Missouri increased by less than 4% from 1990 to 2000, the African American population increased more than 37%. At the same time, the Hispanic population grew by 170% in Central Missouri and 125% in the Southeast.[1]

In Missouri, as elsewhere in the country, traditional remedies to attract and retain teachers have been discussed or initiated, remedies including alternative certification, hiring bonuses, loan forgiveness, and mentoring programs for new teachers. Still, in 1999-2000, 483 of the 524 school districts reported hiring 800 less than fully certified teachers and another 113 outside of their areas of certification; 590 positions were filled by substitutes. As of January 31, 2000, 929 positions were still not filled, as compared to 326 unfilled positions at the same point one year earlier. More than 2,400 teaching positions in the state went unfilled or were filled by unqualified persons.

The vulnerability of rural Missouri students rests not so much with singular definitions of vulnerability related to poverty, geographic remoteness, or ethnic isolation, as it does with a multiplicity of causes. The smallest rural schools are themselves highly vulnerable to forced administrative or school consolidation by a state political structure that remains unwavering in support of the conventional wisdom that "bigger is better" and "bigger is cheaper."

From an opposite viewpoint, Missouri also has many characteristics that can be directed toward positive change. Its state Department of Elementary and Secondary Education (DESE), while emerging from a past of self-identification as a regulatory agency, shows ample signs of willingness to emerge as an agency dedicated to pre-K-12 assistance and participatory guidance. The Coordinating Board for Higher Education (CBHE), which oversees higher education institutions in the state, is an active and willing partner in the ERZ effort. The relationship between DESE and CBHE with respect to teacher certification programs and requirements is highly bureaucratic but has benefited from having a third party (the Rural Trust) provide the synergy around which problems can be confronted and rural-relevant decisions reached. The enthusiastic involvement of DESE and CBHE in planning and undertaking this initiative is a positive indicator of potential success.

Starting With the Problem

Educational reform or renewal efforts have historically been singular in approach, limited in scope and therefore of minimal impact. As conceptualized, the Missouri ERZ Initiative attempts to overcome this limitation by purposefully and simultaneously encompassing multiple purveyors of meaningful educational change. Rather than implement a solution in search of a problem, the ERZ Initiative began in November 2000 by acknowledging several inter-related problems:

- Thirty-five percent of Missouri schools, 65% of its school districts and 22% of its public school students are located in rural areas.
- With 524 school districts, Missouri ranks near the top of all states in the number of small schools.
- The average rural Missouri teacher salary, at $21,556, was third lowest in the U.S. The difference between rural and non-rural teacher salaries ($7,511) was fifth greatest in the country.

- Twenty-seven percent of the teachers teaching out-of-field were rural.
- Twenty percent of rural Missouri schools were faced with declining enrollments of 10% or more.
- The number of teaching certificates issued by higher education had declined by 34% in the previous three years.
- As of mid-year (January 2000), there were triple the number of teaching positions unfilled as compared to 1999. Teacher vacancies were at a 14-year high.
- Pressures for a new wave of small school consolidation were mounting.

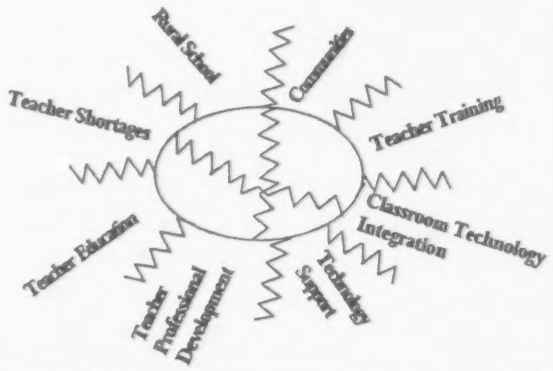
The philosophy of the Rural Trust was a perfect overlay to undertaking a significant effort toward educational change. In a state noted for its independence, hard-headedness, and valued local autonomy, no mandates handed down from on high would have had a prayer of working, but the time was right for pulling together a key group of players whose commitment to holistic change became increasingly evident. Of the 31 such players invited to a meeting in Jefferson City on November 30, 2000, all attended. Among them were representatives of five public and private teacher education institutions, a technical training institution, four statewide support organizations, the Department of Elementary and Secondary Education, the Coordinating Board for Higher Education, five rural school superintendents, and the Rural School and Community Trust.

Discontinuities in the Current Education System

Those attending the November 2000 meeting were invited to contemplate the discontinuities in the current education system (see Figure 1.) Over the last 100 years of increasing professionalization, rural schools had become ever more separated from the communities of which they were a part. Teacher shortages were severely impacting the ability of small schools to offer comprehensive curriculums and meet the increasing demands for "teacher quality" and higher standardized test scores.

Little had changed over time—methods by which teachers were trained and entered the profession continued to produce teachers who continued to teach in the ways they had been taught themselves. The cycle was perpetual. Teacher professional development was episodic and rarely individualized. In attempting to meet the needs of all, it most often met the needs of none.

Figure 3. Discontinuities in the Current Education System



The introduction of technology for many schools meant one computer per classroom or 15 minutes per week in a computer lab. There was little integration of technology into the curriculum because there were few means by which pre-service or in-service teachers could raise their own technology skill levels. This was further compounded by unequal access to basic computer equipment and broadband technologies. In addition, the problem of acquiring adequate technical support and maintenance was often overwhelming and debilitating.

BEST COPY AVAILABLE

The Philosophy of the ERZ Initiative

Consistent with the philosophy of the Rural Trust, the key elements of the philosophy of the ERZ Initiative were shared with meeting participants, namely:

- The "deficit model" of rural education—that rural schools are too small to offer the economic and academic benefits of size—does not serve rural America, nor benefit its students. Rural schools can no longer attempt to mimic the idealized "one best system" of suburbanized education.
- At the heart of the effort to improve public education is the need to rearticulate, restructure, and reinvent the policies and practices for recruiting, preparing, and retaining rural teachers.
- The greatest advantage of rural schools is that they are small and rural; neither attribute needs "fixing."
- If educational change is fostered only within the school—without the cognizance and involvement of the community of which it is a part—such change will neither be sufficient, enduring nor meaningful.

The Approach

The Rural Trust approach in suggesting the formation of Education Renewal Zones in Missouri was spelled out at the initial meeting in November 2000. Missouri would be seen as a pilot state in this endeavor with an eye toward broader replicability of the concept. Each ERZ would logically include

- One teacher training institution
- Ten to 15 K-12 districts in geographic or virtual proximity to the teacher training institution
- An array of educational support organizations and agencies

It was anticipated that two or three Education Renewal Zones would ultimately be developed in Missouri, indicating that of the five teacher education institutions participating, perhaps only two or three would remain involved.

The ERZ partners attending the meeting were asked to focus on four separate but related approaches:

1. Fostering an interrelationship between institutions and communities in the ERZ, involving
    - K-12 and community input in designing a rural teacher emphasis area in teacher education programs
    - Long-term mentoring, instruct tional support, and technology integration assistance provided by colleges to teacher graduates employed by ERZ schools
    - Targeted teacher preparation and job placement
    - Continuous professional development opportunities including the opportunity for college faculty and K-12 teachers to spend time in each other's environment
2. Promoting the appropriate use of technology, ensuring that
    - All teachers entering ERZ schools are technically sophisticated and able to integrate the breadth of available technology into the classroom
    - Teachers are cognizant of distance learning technologies and the role of distance learning in rural schools
    - Community use of technologies is available in the school
    - Technology is used to reinforce the concept of place-based education
3. Creation of a pool of technically capable technology coordinators available to rural schools including

- Development of a two-year degree program for school technology coordinators
- Capability for high school junior and seniors to complete up to one year of such degree program via distance learning while still in high school
- Fostering of a professional opportunity for rural school graduates interested in returning to rural Missouri

4. Integrating the efforts of the peripheral technical and instructional support mechanisms available to rural schools, involving

   - **Missouri Distance Learning Association** (MoDLA): at that time, a fledgling 3-year-old nonprofit organization whose mission was to become the premier resource for distance learning in Missouri
   - **SuccessLink**: an innovative, nonprofit arm of the Department of Elementary and Secondary Education which was heavily involved in providing Web-based, technology-infused curriculum and lesson plan support for teachers linked to the Show-Me Standards
   - **GreaterNET**: an emerging idea that ultimately became a statewide nonprofit organization providing high school course matching and brokering services via two-way interactive television for Missouri schools
   - **Center for Occupational Research and Development** (CORD): the only out-of-state organization involved, this Waco, Texas-based organization was included because of their potential for providing technology support training.

The Challenge

Each of the five higher education institutions—Truman State University, Northwest Missouri State University, Central Methodist College, Southwest Baptist University, and Southeast Missouri State University—was challenged to return in January 2001 with a 30-minute verbal presentation (that would be videotaped) in response to five questions:

1. To what extent is (should) your institution (be) committed to rural teacher education? How does this focus mesh with your institution's strategic plan?

2. What is your vision for providing rural teacher education for the 21st century? How does it differ from the past? What are the components of your plan? What is the rationale for each?

3. How does your institution's plan for contributing to the emergence of an Education Renewal Zone coincide with the vision of the Rural Trust?

4. What is your institutional capacity—including technological capacity—for carrying out your proposed innovations in rural teacher preparation/education?

5. What internal and external resources can be directed toward the ERZ Initiative? What additional resource requirements do you have?

They were asked to present a verbal proposal that would

- Convey the level of institutional commitment to reinventing teacher education
- Express the level of innovation to be reached
- Highlight the specific initiatives—beyond goals—to which the institution was committed
- Detail the "partners" with which the college aspired to work
- Summarize the planned departures from the institutional status quo

One technical training institution, Linn State Technical College, was asked to present a 30-minute verbal proposal outlining how it intended to create an innovative two-year degree program for School Technology Coordinators that would

- Take advantage of unique partnerships
- Incorporate I-TV or other distance learning technologies in a clinical degree program (e.g., only one year in residence)
- Focus on the needs of rural schools
- Enable the enrollment of high school students in dual-credit courses offered toward the degree
- Consider "made-to-order" technology coordinator graduates

Each of the four supporting organizations invited to attend—Missouri Distance Learning Association, SuccessLink, GreaterNET, and CORD—was asked to return in January to make a 15-minute verbal presentation outlining their vision for how it could contribute to the development of Education Renewal Zones in rural Missouri.

Three remaining partners were equally critical to the emerging model. The involvement of the Department of Elementary and Secondary Education (DESE) intended both to spur a closer scrutiny of existing state regulations and guidelines with respect to rural schools and to garner its support for educational change in the K-12 arena. Likewise, the involvement of the Coordinating Board for Higher Education (CBHE), as the governing structure for higher education institutions in the state, was important to the ultimate goal of reinventing rural teacher education programs. The final "partner" in the formation of the Initiative was a six-member team of respected rural school superintendents from around the state, who would serve as the sounding board, evaluators, and legitimizers of initiatives proposed by the ERZ partner institutions, agencies and organizations.

The Proposal Process

In requesting that each invited institution and organization present a verbal proposal, the intent was to place each potential ERZ partner in a different-than-accustomed position. It was clear from the proposal instructions that a premium was placed on ideas and commitment to reexamining the entire process by which teachers are prepared, recruited, and retained in the context of the rural community. Participants were alerted that each of the verbal proposals would be strictly time-limited (just the ideas were requested, not the details) and that each would be videotaped. No written proposals were permitted.

Furthermore, the Rural Trust did not want to be seen as the "granting organization"—it was simply another partner in the emerging ERZ initiative. Therefore, the point was made early and often that the Trust's role in the partnership was to *assist* the partners in identifying external funding, sufficient for building the capacity for agency, organizational and institutional change.

Selection of Higher Education Institutions

The criteria used in identifying the five teacher-training institutions, and in narrowing the five institutions down to three, included

- Small size and ability to implement timely institutional change
- Interest in or focus on the educational use of technology
- Sympathetic administration and leadership willing to assume a role as instigator of change
- Willingness to involve K-12 schools in the institutional planning and teacher training process
- Emergence as an institution at the point of reinventing itself

Meeting with the Rural Trust's staff and consultants on March 27, 2001, members of the Rural Superintendent Team selected three of the five invited teacher training institutions to move forward in developing a detailed proposal for ERZ activities which the Rural Trust could use to solicit foundation and other funding.

It was important to the process that the Rural Trust not serve in the role of "evaluator." The five-member Rural Superintendent Team held the responsibility of choosing the ERZ partners. This role was not taken lightly by either side. Never before had K-12 administrators held such power over higher education institutions, nor were they likely to abuse that power and thereby diminish it. Because they were not used to asking for input on matters of teacher education, colleges of education found the process unique. The extent to which they found the process comfortable or disconcerting turned out to be in direct correlation to how their verbal proposals were viewed by the Superintendent Team. That is, colleges of education that displayed less willingness to accept change, demanded to know the financial parameters under which they would be expected to work, touted their current programs over their ideas for the future, and let slip any level of institutional arrogance were seen by the Superintendent Team as less likely to succeed as an ERZ partner.

The Superintendent Team chose three teacher training institutions and the technical training college as the ERZ higher education partners.

Northwest Missouri State University (NWMSU) was founded in 1905 and is a public, four-year regional university. Located in Maryville (population 10,660), the university is a master's-level institution, serving northwest Missouri, Iowa, and Kansas through an extended electronic campus. A long-time proponent of the use of technology in education, the university provides a networked computer terminal in every residence hall room. Of its 6,462 students, 545 are enrolled in undergraduate professional education programs. The university has 31 full-time education faculty members and 52 adjuncts. Three hundred fifteen of Missouri's 524 school districts currently employ NWMSU graduates. NWMSU graduates make up 75% or more of the faculties in 13 Missouri school districts.

Central Methodist College (CMC), located in rural Fayette, Missouri (population 2888), is a small, church-affiliated, liberal arts college founded in 1853. Its focus on undergraduate and master's level teacher preparation programs makes CMC a partner with many small, rural schools in central Missouri. Of its 1,260 students, 1,138 are enrolled in undergraduate professional education programs. The college offers undergraduate education (2+2) programs on the campuses of Mineral Area College and East Central College as well. The college has 18 full-time education faculty members and 64 adjuncts. CMC graduates are currently employed in 294 of Missouri's 524 school districts. CMC was one of three original partners in the state's earliest two-way interactive television networks. The college has been involved since 1993 in teaching dual-credit classes via I-TV to area high schools.

Southeast Missouri State University (SEMO), founded in 1873, is a public university located in Cape Girardeau (population 34,438), in the Bootheel region of Missouri. Many SEMO students (885 of 8,863) are enrolled in undergraduate education programs on campus and delivered at Jefferson College, Three Rivers Community College, and the Bootheel Education Center at Malden. SEMO's education faculty includes 45 full-time and 43 adjunct professors. The infusion of technology is a major emphasis within the teacher education program. SEMO graduates are employed in 318 of Missouri's 524 school districts; the teaching faculties of 37 Missouri districts are 75% or more SEMO graduates.

Linn State Technical College (LSTC) was established in 1961 as a postsecondary, residential vocational/technical school. In 1995, the school was reauthorized as Linn State Technical College, a public postsecondary institution. LSTC is authorized to grant certificates and associate of applied science degrees to its graduates, offering technical programs in 21 different fields of study. The College's main campus is located east of Linn, Missouri, the county seat of Osage County. A second campus is located within the City of Linn. The Physical Therapist Assistant program is located in Jefferson City and a shared campus with Linn State Technical College services dedicated to manufacturing is located in Mexico, Missouri.

The Crystalization of Ideas

At the March 2001 meeting, each partner was given 30-45 minutes to present a written proposal and budget for each major activity with which they intended to move forward over the next five years. The format included (1) planning activities; (2) implementation activities; (3) a timeline; (4) the institutional/agency/ organizational collaborators involved in each activity; (5) the funding match contributed by the institution/ organization; and (6) external funding required.

The role of the Rural Superintendent Team was to

1. Determine whether the activities proposed were consistent with either of the two Rural Trust goals, that is:

   A. To encourage systemic change in the process of rural teacher education and recruitment; and

   B. To maximize the assets and minimize the deficits of small schools through the meaningful utilization of appropriate technology

2. Identify any unnecessary duplication or incompatibilities across proposals

3. Assess whether the proposed funding requirements for Year 1 and Years 2-5 were insufficient, realistic or excessive (e.g., whether the dollars requested were in line with the anticipated outcomes)

4. Record their assessment of each proposal

5. Meet at the conclusion of the presentations to discuss each of the proposals and to provide input for staff in writing the umbrella proposal to potential funders

The Scope of Efforts Undertaken by the Missouri ERZ Partners

While the focus thus far has largely been on the *process* by which Missouri higher education institutions and their partner rural school districts, agencies and organizations will map the future of rural teacher education and the appropriate application of technology in rural Missouri schools, serious efforts are under way and significant results are evident, in spite of limited external funding.

For several months the Rural Trust attempted to identify funds that could be targeted to the Missouri ERZ Initiative, but the five-year, $10.6 million dollar umbrella proposal ($8.6 million in external funds and $2 million in local match), although pared down from the composite price tag originally submitted by the ERZ partners, proved to be a hard sell. Coupled with the downturn in the economy and the aftermath of September 11, 2001, it became clear that while the vision for change remained strong and intact, the funding reality would require a slower progression of steps. The contracts between the Rural Trust and each of the ERZ partners, covering January-June 2002, were minimal. In aggregate, the total ERZ budget for that period was $100,000, a far cry from the proposed budget of $1.5 million for the first year.

Still unable to solicit an external funding source capable of funding the entire ERZ Initiative, the

Rural Trust worked with a half dozen interested foundations during the spring and summer of 2002 in parceling out individual ERZ activities of interest to each. This led to a combined $375,000 in external funding, which was applied to Missouri ERZ efforts for 2002-2003.

With only $475,000 in external funds covering a two-year period, the Missouri ERZ partners have made serious and meaningful inroads toward their independent and collective visions. More important, however, have been the institutional shifts seen by the higher education partners in their willingness to collaborate across institutional boundaries, their purposeful involvement of people in rural schools and communities in identifying the needs of rural schools and shaping the future of rural teacher education. It would be an exaggeration to say that the authority with which teacher education institutions have directed the future of rural schools has been relinquished, but it is extremely encouraging to see how higher education institutions are soliciting the input of rural school people, with a genuine regard for the needs they have identified and solutions they have suggested.

Efforts Underway: The Northwest ERZ

The major thrust of Northwest Missouri State University in their original presentation to prospective ERZ partners was to establish a close and ongoing relationship between the NWMSU College of Education, the Northwest Regional Professional Development Center (located on the NWMSU campus) and an independent nonprofit organization, Healthy Communities for the Midwest Four Corners. Focusing their efforts on systemic community and educational renewal, the consortium of Northwest ERZ partners initiated a "community visioning" process in Atchison County, Missouri. The process involved 70 county citizens and resulted in the formation of three action committees who have begun to work on three separate, but interrelated, areas of concern (i.e., education, attracting new career opportunities, and community attitude). Firmly believing that rural schools and communities are inextricably linked, and that the success or "health" of one depends on the "health" of the other, the coalition has identified the activities that the citizens of the county believe are most important in securing a healthy, viable future. Their vision is "strong, prosperous communities and schools working together to achieve a local and regional vision of excellence." They believe that it is vital to begin with each school district and community defining itself and working through a systematic process of self-evaluation.

Within each community and school district, relationships will be transformed into partnerships, an understanding will be reached of what assets are in place and which must be developed or acquired, and a vision for the future will emerge with a plan for achieving it. In their words, the result will be an "Education Renewal Community."[1] While this approach is not necessarily unique in community economic development efforts, what is unique is the pivotal role of the College of Education in this effort.

Each of the five major institutional players in the Northwest Missouri ERZ—NWMSU College of Education and Human Services, NWMSU College of Arts and Science, Northwest Regional Professional Development Center, Healthy Communities for the Midwest Four Corners, and the Heartland Regional Community Foundation—brings a wealth of history and experience to the effort, but in their process and cross-collaborative endeavors lies the real innovation.

Thus far, the focus of the NWMSU-Healthy Communities-ERZ efforts has been centered in Atchison County. Among the ongoing community committees established in Atchison County, located in the extreme northwestern corner of Missouri, is a cross-section of the county's three communities (Tarkio, the county seat pop. 1,935[2] and K-12 enrollment of 592[3] ; Rock Port, pop.

1,395 and K-12 enrollment of 382, and Fairfax, pop. 645 and K-12 enrollment of 166). Particularly revealing of the process were the comments of the superintendents involved who believed that what they were doing was building a county—by working together—not just perpetuating the cycle of each town struggling to carve for itself a place in the future. They saw their purview as one of systemic community and school revitalization, and are as much involved in the efforts of the career development and "attitude" committees as they are of the education committee.

The career development committee seeks to bring new and expanded careers to Atchison County, understanding the problems inherent in focusing only on just attracting "jobs." The attitude committee seeks to change people's negative attitude to a more positive one about Atchison County. They believe that the pervasively negative attitudes are preventing them from taking action for themselves. The education committee seeks cooperative, cross-district solutions to their problems, knowing that they have the support of Northwest Missouri State University. As one superintendent shared his initial surprise at NWMSU's involvement—"they're not even located in the county."

NWMSU College of Education does have some ideas of its own with respect to implementing teacher education renewal efforts, such as a focus on the early identification of potential rural teachers, significant changes in teacher pre-service education, recruitment and retention of teachers by rural schools, critical shortage area stipends and alternative proficiency incentives, and new methods of alternative teacher certification. But for now NWMSU is content not to impose those solutions. They believe that creating the ongoing means—through the Healthy Communities process—of securing input from rural educators and community citizens will ultimately lead to a much better, more thoughtful, and productive outcome.

This is not a sterile process. Members of the College of Education and NWMSU faculty are integrally involved. They go to the communities; they do not expect the communities to come to them.

In response to the Rural Superintendents Team's enthusiasm over the concept of creating a Rural Advocacy Program, the NWMSU Regional Professional Development Center will house the first RAPper (as the advocate will be known), who will work with 12-15 schools in the Northwest ERZ. In a cooperative venture with SuccessLink, NWMSU will provide office space and support, while SuccessLink will handle salary, benefits, and travel reimbursements. The RAPper will serve in an "assistant superintendent" role for client school districts, providing expertise and access to existing resources. The RAPper will provide assistance in school finance, technology planning and implementation, external funding opportunities (entitlement and competitive), curriculum development and alignment, assessment analysis, and professional development.

Efforts Underway: The Central ERZ

In spring 2002, Linn State Technical College created a school technology coordinator degree option, which was approved by the Coordinating Board of Higher Education. The program option, within their Networking Systems Technology degree, specifically focuses on the needs of rural schools and support of their technology. Students enrolled in the program will receive an associate of applied science degree upon completion of the 72-hour technical and general education requirements at LSTC and cooperating institutions. The program is focused on preparing networking systems technology students to work within an educational environment and therefore has concentrated coursework in system maintenance, Novell operating systems, and courses related to educational pedagogy and the educational application of technology.

The latter educational courses are provided by Central Methodist College, which has worked in tandem with LSTC in the creation of this degree option for Rural School Technology Coordinators. The first cohort of eight students has completed the first summer semester in intensive network training. The students have all secured a sponsoring school district to which they returned in a paid internship during the school year. They continued to take technical courses from Linn State, as well as education courses via distance learning through Central Methodist College during the school year. They will return to the LSTC campus this summer for an additional on-site semester. They will return the following fall semester to complete their supervised school-based internship and remaining distance learning classes in order to complete the degree requirements.

To date, Central Methodist College has developed two online teaching courses for its own undergraduate education degree program and for use in Linn State's school technology coordinator curriculum. The college is in the process of developing the third and fourth courses in educational psychology and instructional methods to be incorporated into the degree program. In addition, Central Methodist College is working with a diverse group of rural school administrators in central Missouri to design and implement a new teacher certification program in cross-categorical special education across its three campuses as well as new middle school and secondary content certification programs at the East Central and Mineral Area campuses. Both programs were identified as major needs by the K-12 ERZ partner districts.

Additional efforts undertaken by CMC include exploring a "competency-based" (rather than a "course-based") model of rural teacher education and development and implementation of an alternative teacher certification program.

Efforts Underway: The Southeast ERZs

Southeast Missouri State University (SEMO) has developed two separate ERZs, both because of the divergent needs of the ethnically diverse Missouri Bootheel and the impoverished Ozarks, and because of the distances and terrain deterring travel. Spurred by the input from rural school advisory groups in both regions, SEMO provided scholarships for 38 rural school teachers from across the two ERZs to attend intensive curriculum-specific Summer Institutes in communication arts, math, social studies, and science; as well as to do a week-long Teacher Academy, which also involved each school's principal. As requested by their rural school advisory members, future summer content area institutes and Teacher Academy sessions will be brought to each ERZ rather than requiring teachers to come to the Cape Girardeau campus, to enable greater participation of teacher-administrator teams in each ERZ school. Next summer, participants in each ERZ will have the opportunity to attend four, four-day institutes within their region, eliminating the need to travel the considerable distance to the college.

In the planning stages are efforts to train on-site mentors in ERZ school districts to work with new teachers. A mentoring assessment system will also be developed, which will provide a qualitative baseline for determining the effectiveness of trained mentors in ERZ districts. SEMO plans to train and provide support stipends to cooperating ERZ teachers who guide and assist pre-service teachers during the student teaching process and create a system of ERZ school site associations aimed at new ways of attracting young people to the teaching profession.

In addition, SEMO plans to conduct a formal needs assessment with its K-12 ERZ partner districts to direct further changes in teacher professional development programs, pedagogical and curricular improvement, mentoring programs, modification of teaching environments, and recruitment and retention practices.

Plans for creating a new rural Professional Development School (PDS) model are also in the development stage. A prime candidate for implementation of this model is the Hayti R-II School District in Pemiscot County which encompasses both the town of Hayti (pop. 3,207 with 55% Caucasian and 44% African American) and Hayti Heights (771, all of whom are African American). The overall population in both towns declined from 1990 to 2000 (by 2% in Hayti and 14% in Hayti Heights). The Caucasian population in Hayti continues to decrease (down 18% from 1990-2000) as the African American population increases (up 23% from 1990-2000).

Literally across the tracks from Hayti, Hayti Heights was founded during the Depression by the Farm Services Administration. The town was incorporated in 1972 but with no city services (such as streets, sewer, etc.). To this day, there are virtually no businesses in Hayti Heights, the streets are filled with potholes and obstruction, and housing is marginal. Fewer than three-quarters of the 382 high school students in Hayti will ultimately graduate. The annual dropout rate is 7.5%. Less than half of the graduates go on to college. There are 55 elementary and 32 high school certified staff. Eighty-one percent of the students are eligible for free or reduced lunch.

The widespread mechanization of agriculture in the Bootheel has left virtually no opportunity for employment. The unemployment rate in Pemiscot County is 9.1% (September 2002). Hayti R-II is the only outstate school district on the Department of Elementary and Secondary Education's list of "academically deficient districts" (all of the others are in Kansas City and St. Louis). A significant percentage of high school students read at an early elementary grade level; MAP (Missouri Assessment Program) scores are exceedingly poor with the majority of high school students falling at the two lowest proficiency levels. Teenage pregnancy rates continue to be a serious concern.

The Professional Development Schools concept on which SEMO is working involves the merger of three separate concepts: (1) a nontraditional professional development school; (2) a learning community; and (3) place-based learning. Rather than choose a high-achieving, model school district in which to implement a PDS, SEMO's plan is to experiment with a PDS model in which adjunct faculty would be identified or hired to provide continuous support and intensive in-service training to teachers on-site in Hayti. SEMO education students, rather than spending their entire student teaching in a "model" district that would help to provide support to Hayti faculty, thereby hone their own teaching skills while obtaining a first-hand understanding of teaching in a challenging setting. What is envisioned is a serious cooperative venture between an academically deficient, but committed, school district and a teacher education institution which would positively impact the teaching and learning capacity of the school, train rural pre-service teachers in extended clinical placements, provide long-term onsite master teachers to work with existing staff, supported by the resources of SEMO and their Regional Professional Development Center, while engaging the community in the process.

Other Efforts Underway

In August 2002, MoDLA, GreaterNET, and CORD collaborated in the first three-day statewide training workshop for 18 Missouri I-TV teachers, administrators and facilitators, which focused on curriculum development, administrative organization, and integration of technology and instruction, along with the technical manipulation of the equipment. MoDLA and GreaterNET are committed to providing ongoing statewide training for I-TV instructors, administrators and facilitators. In addition, MoDLA developed and distributed 600 copies of "MoDLA Standards and Guidelines for Distance Learning." SuccessLink provided secretarial, web mining, and office support to

MoDLA and GreaterNET, as well as serving as the virtual meeting hub for ERZ partner meetings by providing full access to their I-TV facilities.

GreaterNET hired a half-time director, developed a statewide advisory group, began the development of course scheduling software, and in its first year of operation matched or brokered 13 two-way interactive television classes to 225 students across 24 sites and 15 school districts in areas in which local teachers could not be hired. Now in its second year of operation, a part-time program development officer has been hired who is responsible for I-TV instructor support, curriculum assistance, lesson plan oversight, textbook distribution, instructional problem solving, and weekly contact with I-TV instructors. GreaterNET recently authored a comprehensive white paper which will assist I-TV adopter districts as they wade through the technical and organizational decisions necessary for developing a K-12 two-way I-TV network.

The Missouri ERZ Model: The Future

Within the vision of the ERZ partners for educational change are many components that have yet to be implemented. Indeed, only the most preliminary steps have been taken toward the most difficult and systemic changes envisioned. It is important to realize that the activities undertaken in support of the overall vision of the ERZ Initiative are still emerging and will continue to do so, as part of a fluid and dynamic process as closely attuned as possible to the rural schools and communities served by the ERZ Initiative.

Preliminary Lessons Learned

The Awarding of Credit

The role of the Rural School and Community Trust is one of catalyst and enabler. The efforts of the ERZ partners should not be considered "projects" of the Rural Trust nor does the Rural Trust wish to take credit for their implementation. To do so would be to trivialize their importance and undermine their institutionalization. Much of the value of what has occurred to date lies not so much in the activities implemented, but in the change in mind-set among the partners involved, the level of cross-institutional collaboration toward common goals, and the emphasis on meeting the needs of rural schools. Credit is free, but to the extent that credit can be awarded, it lies with the individual and institutional pioneers in each ERZ.

Education Renewal Zones: Potential Impact

In encouraging the broad scope of initiatives across the ERZs, the participating partner institutions, agencies, and organizations were cautioned not to think too narrowly. A major challenge of any nationally focused reform effort is to achieve significant impact. With the school as its sole focus, virtually all past educational reform efforts have suffered from limited impact, especially those that have relied on the age-old "diffusion of innovation" theory as the means for a reformation beyond a scattering of "demonstration sites." Without a sufficient infusion of incentive funds, without armies of change advocates, and without the longevity to see it through, such efforts at educational reform have failed to realize widespread deployment.

The Education Renewal Zone Initiative is based on the premise that to maximize impact it is necessary to effect change simultaneously at the state education agency, higher education institution, community, and school levels. Only in this way can change become systemic, reinforced, and therefore likely to result in perpetuating an ongoing culture of change—that is, modifications resulting in improved outcomes. It is believed that the ERZ Initiative holds promise as a replicable model for engendering such systemic and meaningful change.

A Reciprocal Relationship of Trust

A reciprocal trusting relationship among partners has been a key factor in the success of the Missouri ERZ model. Missouri's higher education institutions have historically needed to compete with each other for students, faculty, funding, and recognition. It would be naive to say that this situation has totally changed, but inroads have been made. A growing collegiality is evident not only across participating higher education institutions, but also across public-private barriers, vocational and academic institutions, elementary-secondary and higher education, and agencies and organizations. Ideas are no longer closely guarded, but rather are shared, adopted, adapted, and celebrated across institutional lines. With no attempt to mold the ERZ efforts of each institution to parallel those of the others, a hybridization of ideas has nevertheless occurred, inspired by both statewide ERZ meetings, but even more importantly, by cross-institutional contact between meetings. As one partner put it, "If nothing else comes of the ERZ Initiative, we will have succeeded. We have learned to talk with each other."

The Pivotal Role of the Rural Superintendent Team

From the beginning, the six-member Rural Superintendent Team has served as the collective conscience, evaluator, prodder, and legitimizer of efforts planned and undertaken by the higher education institutions. They have risen to a position in which their opinions are valued and sought. They have not taken this role lightly. Each team member is unique, but all bring to the role an unquestioned dedication and savvy about rural schools. They are three women and three men, evenly dispersed across the state, five representing K-12 districts and one representing a K-8 district, all from small rural schools, with experience ranging from three years to a lifetime, and with very divergent student populations and needs. Each has managed to succeed in his or her own environment and brings to the role both the intuition and skills not only to survive but to flourish under adverse conditions. They are creatively aware of the political and regulatory constraints under which they are asked to operate, but they continue to "push the envelope," knowing that ultimately they are only constrained by what serves in the best interests of their students and communities.

It is difficult to say whether, left to their own devices, the higher education institutions would continue to see the vision for change or adhere to their commitment to reinvent rural teacher education, but with the continued involvement of the Rural Superintendent Team, it is unlikely that they will be put to that test. The superintendents are personally committed to the ERZ Initiative, reinforced by the value they see in their involvement.

Starting with the Problem, Guided by the Input

While seemingly simplistic, the process of identifying problems and then developing programs and activities as a way to resolve or ameliorate those problems is not a typical sequence of events in educational reform efforts. Generally, educational programs are implemented as "best practices" based on the adoption of a program from another setting, from another set of circumstances, based on another set of precipitating factors. With the ERZ model, the problems surrounding rural schools in Missouri were held up as the reason for action. The methods devised (and still being devised) for alleviating those problems are not based on the adoption of transplanted, piecemeal "programs" from afar. They are emerging as the best, cooperatively planned solutions to immediate circumstances, cultures, and localities. Furthermore, the efforts are not being implemented in the isolation of a higher

education environment or by a single institution. They are being developed and implemented with the ongoing input and involvement of the rural schools and communities where teachers trained through ERZ Institutions will ultimately be placed.

The Vulnerability of Rural Missouri's Youth

In every rural K-12 Missouri school district are those vulnerable youth whose needs are not being met, whose environmental and behavioral conditions impede their learning, whose family or other circumstances prevent their academic success, or whose socioeconomic status threatens their future. While the Missouri ERZ Initiative does not single out such vulnerable youth for the application of separately targeted program efforts, it is with these students in mind that the broader initiatives being developed are envisioned. The inability of small, rural schools to find, hire, support, and keep good teachers, to provide low-demand, advanced and dual credit classes, or to meet individual academic needs affects all students, but most critically affected are those youth who are already vulnerable. The likelihood that they will graduate from high school having learned the academic skills to prepare them for postsecondary education or employment is further diminished. The ERZ initiative, through its systemic approach to educational change with ongoing input from the communities served, provides the best opportunity for making a meaningful impact on the vulnerable youth of rural Missouri.

Endnotes

1 Presentation by the NWMSU team to the Rural Superintendent Team and assembled potential ERZ partners, January 17, 2001

2 2000 population

3 K-12 enrollment as of the 2002-03 school year

Community Service

WRDC 6 ***Understanding Community Development: A Guide for Native American Community Leader's and Professional.***
Trainer's Manual. $2.00

WRDC 7 ***Understanding Community Development: A Guide for Native American Community Leader's and Professional.***
Participant's Manual. $2.00

WREP 105 ***Designing a Citizen Involvement Program: A Guidebook for Involving Citizens in Resolution of Environmental Problems.***
Robert E. Howell, Marvin E. Olsen, and Daryll Olsen. February 1987. $5.00

Please send all publication orders by mail, fax, or e-mail to

Utah State University
Extension Publications
8960 Old Main Hill
Logan, UT 84322-8960

Phone: (435) 797-2251
Fax: (435) 797-3448
E-mail: extension.publications@usu.edu

Be sure to include the publication title, publication number (if applicable), author, price, and total quantity requested. Please provide your complete name, shipping address, phone and fax numbers, and e-mail address.

U.S. Department of Education
Office of Educational Research and Improvement (OERI)
National Library of Education (NLE)
Educational Resources Information Center (ERIC)

NOTICE

Reproduction Basis

[X] This document is covered by a signed "Reproduction Release (Blanket)" form (on file within the ERIC system), encompassing all or classes of documents from its source organization and, therefore, does not require a "Specific Document" Release form.

[ ] This document is Federally-funded, or carries its own permission to reproduce, or is otherwise in the public domain and, therefore, may be reproduced by ERIC without a signed Reproduction Release form (either "Specific Document" or "Blanket").